

MANUFACTURERS' RECORD

A WEEKLY REVIEW OF THE IRON, STEEL, METAL & HARDWARE TRADES.

AND A MANUFACTURING AND TEXTILE PAPER, DEVOTED TO THE UPBUILDING OF SOUTHERN MANUFACTURES AND THE DEVELOPMENT OF THE MATERIAL RESOURCES OF THE SOUTH.

Vol. 7. No. 20.
WEEKLY.

BALTIMORE, JUNE 27, 1885.

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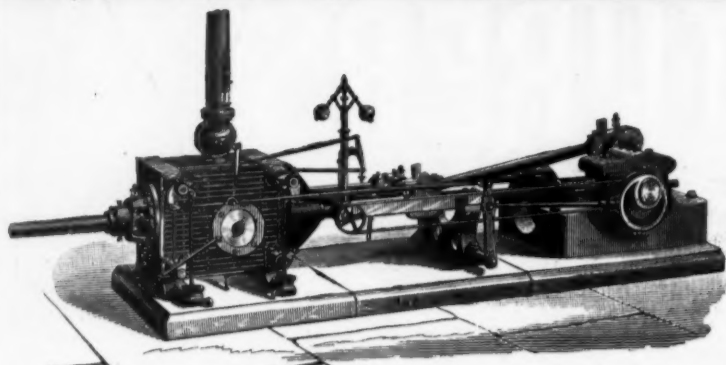
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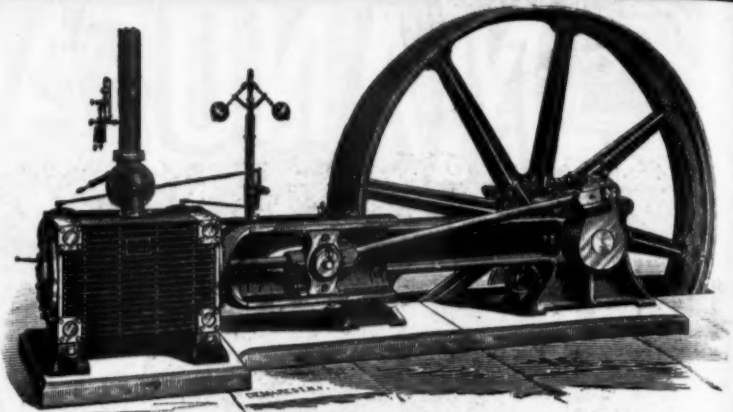
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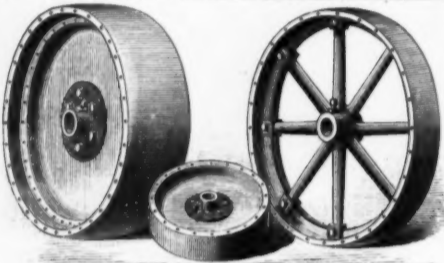
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Built by E. P. ALLIS & CO.,
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as in a marked degree the best of its type in respect to the design of its details, its massive construction and very superior workmanship. We call especial attention to the wrought-iron bed, and invite examination of working drawings, which can be seen at our office. Or we will send same with one of our engineers to any party contemplating a purchase. These drawings show the superiority of detail design in a manner that cannot be approached in any advertisement or correspondence. Mr. Edwin Reynolds is probably at this moment the most successful designer of heavy COMPOUND CONDENSING ENGINES in the country. The high-duty PUMPING ENGINES, high-speed BLAST ENGINES (with Reynolds' patent metal air valves) and SEWAGE PUMPS, built by the above concern, represent the most advanced engineering. They also build an engine designed especially for high-speed service in rolling mills, having a positive valve motion, cut-off ranging to $\frac{1}{2}$ stroke and speed variable while running. The company makes a specialty of heavy work, being fully equipped with large tools. Having been appointed SOLE REPRESENTATIVES OF MESSRS. E. P. ALLIS & CO., we will estimate as such on heavy engineering construction for Cotton Mills, Rolling Mills, Steel Works, Blast Furnaces, Water Works, Municipal Improvements, &c. Send for our Circular of the Reynolds-Corliss Engine, giving comparative illustrations of details.

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And contract for the erection of same on their own capital and responsibility.

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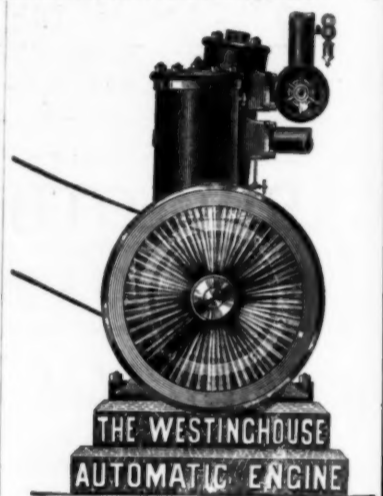
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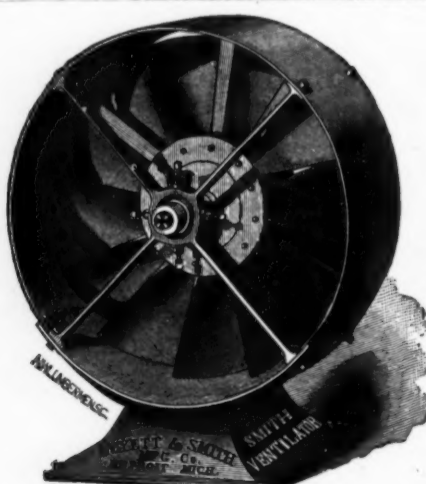
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VENTILATING WHEEL.



DOUBLE EXHAUST FAN.

✦ In placing the **SMITH FAN**, Made by the HUYETT & SMITH MFG. CO., Detroit, Mich., ✦

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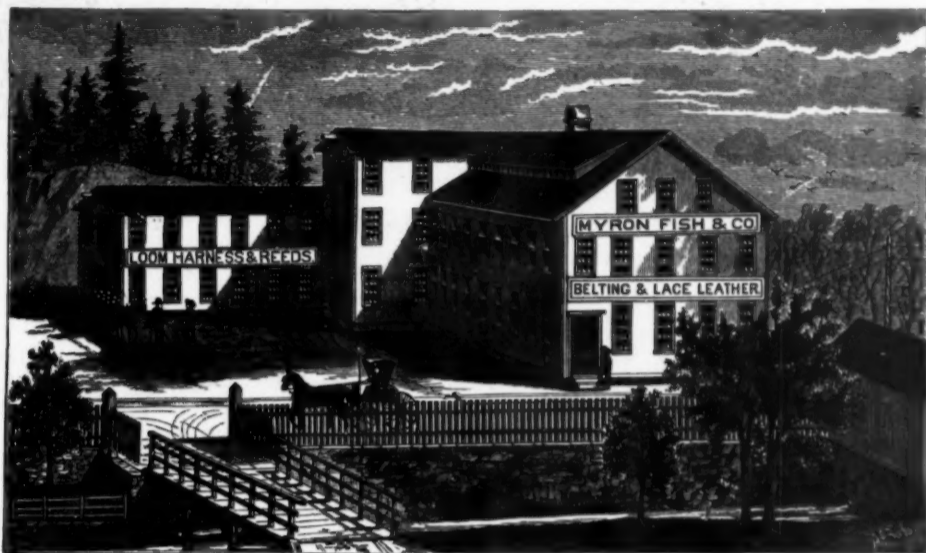
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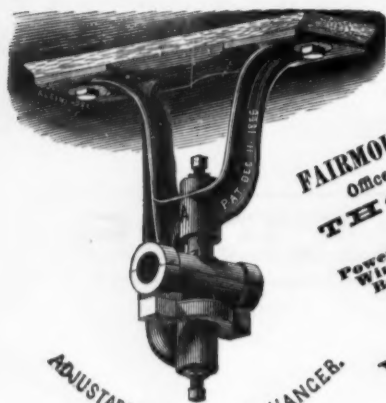
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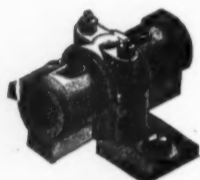
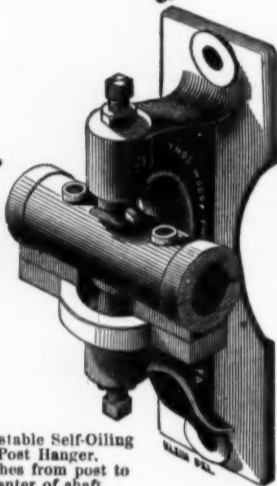
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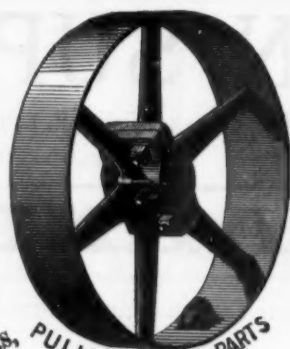
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Ball and Socket
Self-Oiling Pillow Block.DOUBLE-BRACED ADJUSTABLE
SELF OILING HANGER.Adjustable Self-Oiling
Post Hanger.
6 inches from post to
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Manufacture as Specialties
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16, 18 and 20 yards Circumference,
WITH IMPROVED HECKS.
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ADJUSTABLE SELF-OILING HANGERS,
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Pulleys, from 4 inches to 10 feet in diameter.
PATENT FRICTION PULLEY.
Pulleys in two parts, any size required.
Oil Presses for Lard, Fish and Paraffine.



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Simple, reliable and very durable.
Suitable for any kind of driving, they
serve equally well as driver or driven.

Special Driving,
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furnished for any position
where possible to transmit power by belts.
PULLEYS from 4 inches to 10 feet in diameter.

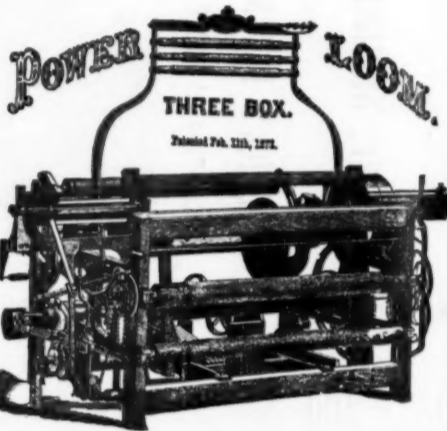
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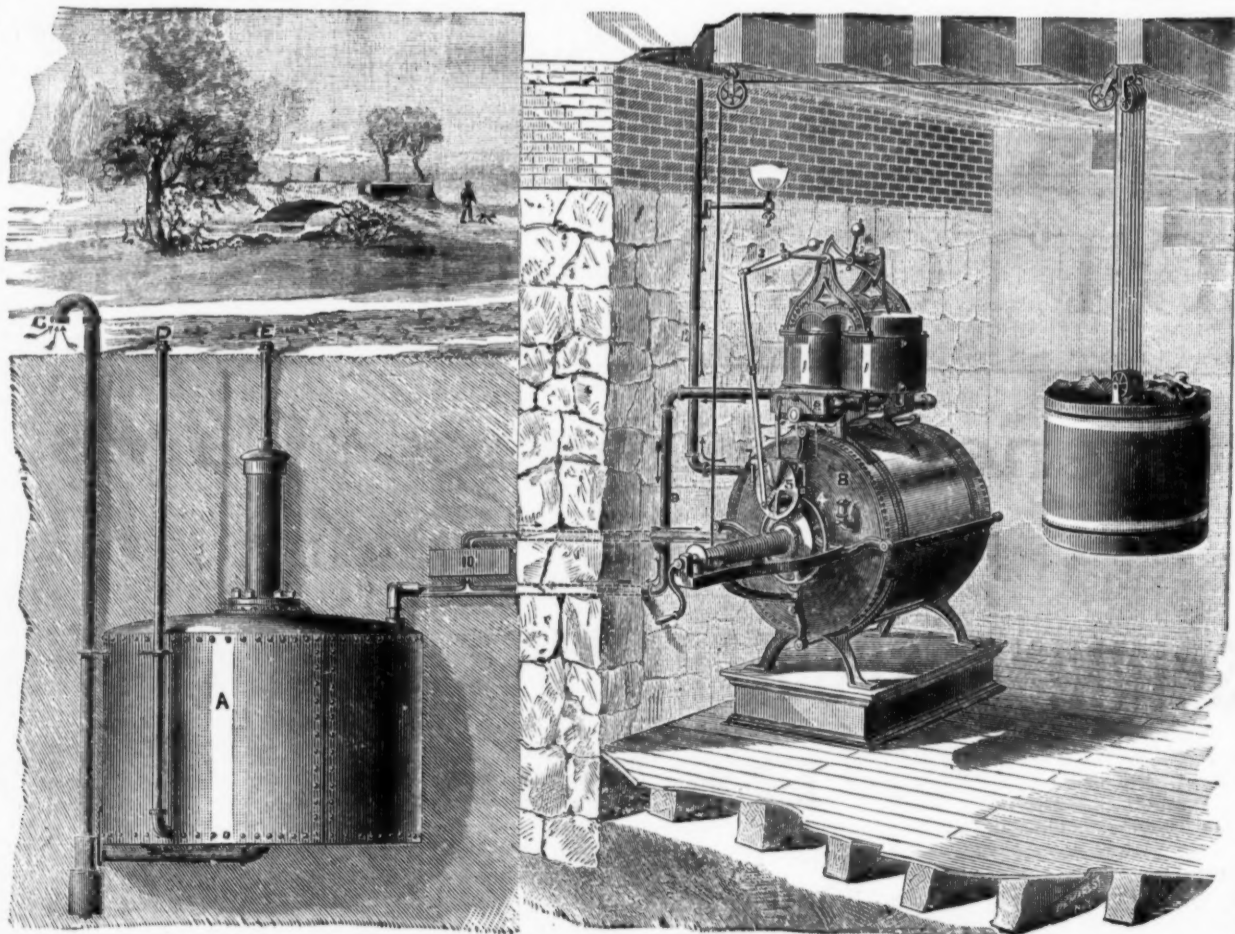
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Only Gas Machine
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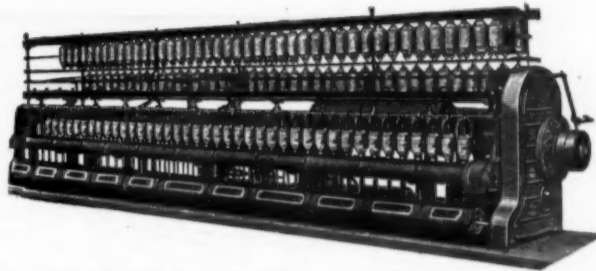
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7,000 SELF-STOPPING WARPERS,

Already working with latest improvements.

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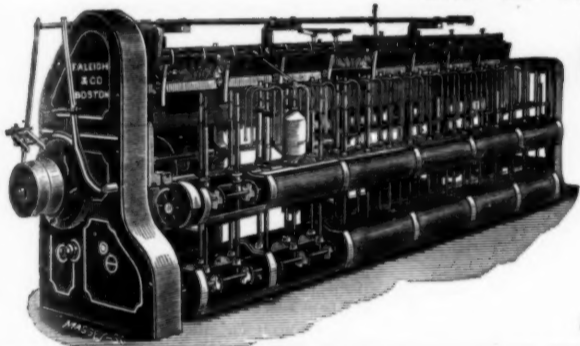
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EVERY RING WARRANTED.

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Capable of controlling with the utmost accuracy the motion of a watchman or patrolman as the same reaches different stations of his beat. The instrument is complete in itself, portable, and as reliable as the best lever watch. It requires no fixture or wires communicating from room to room, as is the case with ordinary watch clocks.

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Provided with Close
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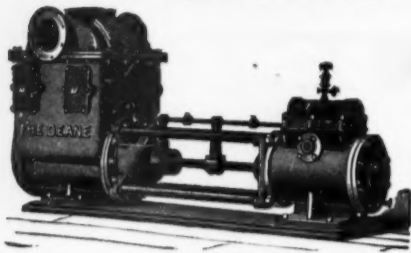


Uses the "A"
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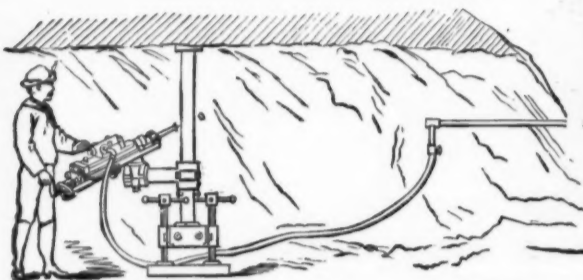
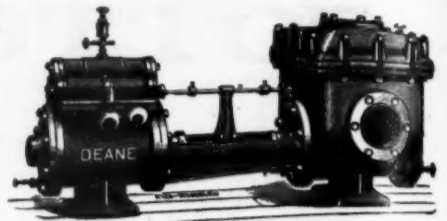
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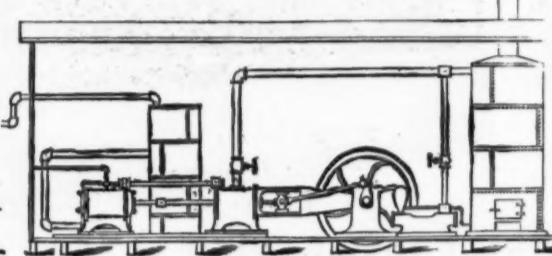
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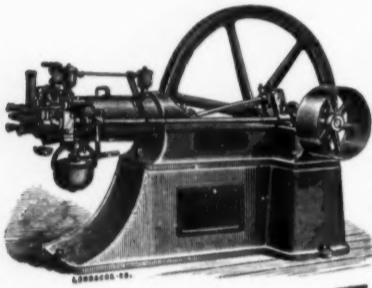
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Rock Drills,
Air Compressors, and
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Over 14,000 in Use. Otto Gas Engine

20 to 70 per ct. less Gas consumption than ANY other ENGINE.

Working Without Boiler, Steam, Coal, Ashes or Attendance.

Started instantly by a Match, it gives full power immediately. When stopped, all expense ceases.

No explosions, no fires nor cinders, no gauges, no pumps, no engineer or other attendant while running. Recommended by insurance companies. UNFURNISHED IN EVERY RESPECT for hoisting in warehouses, printing, ventilating, running small shops, &c. Sizes: 1 to 25-horse power.

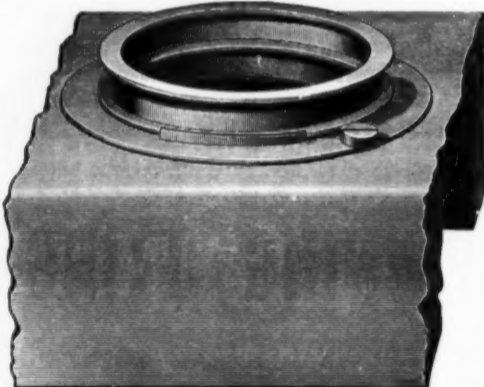
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DOUBLE ADJUSTABLE Spinning Rings.

GEORGE DRAPER & SONS,
HOPEDALE, MASS.

TELEGRAPH ADDRESS AND RAILROAD STATION,
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Number of Rings sold.	Number of Rings sold for repairs.
1869..... 6,025.....	
1870..... 20,258.....	
1871..... 38,648.....	
1872..... 94,264.....	12
1873..... 117,301.....	
1874..... 168,382.....	500
1875..... 223,924.....	963
1876..... 185,319.....	947
1877..... 270,811.....	946
1878..... 215,214.....	3,309
1879..... 336,918.....	8,007
1880..... 567,860.....	11,264
1881..... 659,730.....	8,974
1882..... 636,715.....	22,515
1883..... 416,500.....	21,689
1884..... 319,869.....	25,105
1885, 5 mos. 112,522.....	12,118
Total number sold in 16 years..... 4,390,260	116,349
Total number in use 4,373,911.	

The great durability of our Rings is shown by the fact that we have more rings in use over twelve years old than all we have sold for repairs.

This statement shows unmistakably that a mill once supplied with our rings need think but little of the cost of repairs. As the number sold for repairs is an average of about twenty per cent. of the number sold the tenth year before, the average life of our rings will be at least twelve years.

Do not make the mistake of ordering new frames without specifying Double and Adjustable Rings. While they cost more to begin with, they are much the cheapest in the end, on account of their uniform excellent quality and unparalleled durability.

As an encouragement to use none but the best of Rings, we have decided to reduce the price on and after the first day of January, 1885, of those 1½ inches or less in diameter, without holders and screws, to be used only to take the place of our rings worn out, to 12 cents each.

Washburn & Moen Manufacturing Co., Worcester, Mass.

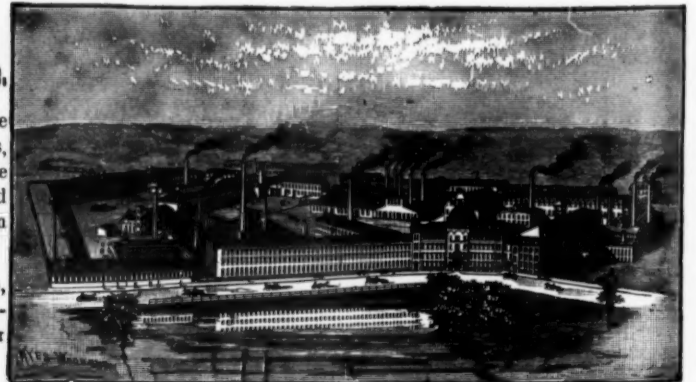
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Iron and Steel Telegraph and Telephone Wire.

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Send for Price-Lists, Circulars and Descriptive Pamphlets on Our Specialties.



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STEEL BARB WIRE.

The Best Fence Material in Use.
For Sale by Special Agents and Hardware

Proof against Fire, Wind and Flood.
Dealers in all Parts of the United States.

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Notes * From * Dixie.

BY CHAS. H. WELLS

It is now almost certain that the Central Railroad Company, of Georgia, will get the Greenville & Laurens Railroad. A conference between Mr. W. L. Mauldin, president of the Greenville & Laurens, and C. W. G. Raoul, of Savannah, president of the Georgia Central, took place a few days ago in Atlanta, and the trade consummation fixed for the 19th inst. The Georgia Central is a wide-awake corporation, and every day is extending its feelers into new territory. Greenville has never been a competitive point since both the Columbia & Greenville and the Air Line roads are owned by the same people, but now it is extremely probable the Richmond & Danville will be made to feel very keenly the sting of competition. The Greenville & Laurens Road will be under the charge of Capt. J. A. Bass, of Augusta, who is superintendent of the Port Royal & Augusta and Augusta & Knoxville—leased lines of the Georgia Central. The general superintendent of the Georgia Central Road is William Rogers, Esq., of Savannah, one of the most courteous, competent and thoroughly well-posted men in the New South to-day. He has an immense amount of responsibility, but discharges his duties with both credit to himself and extreme satisfaction to his employers.

The Buffalo, N. Y., Lumber World, a monthly publication of the highest standing and noted for its conservatism, says in the June number: "Much attention has been given in the columns of this journal to the opportunities for profitable investment in manufacturing interests in the Southern States, and we have reason to know that large numbers of our readers have been led to investigate these opportunities with much satisfaction and advantage." Several months ago this same journal devoted several pages to printing a list of all the timber lands for sale in South Carolina, and it has led to the purchase of several large tracts of lumber by syndicates from Chicago, Buffalo and Cleveland. All the lands so purchased will be held simply as investments. Well-informed lumbermen say that in twenty years every acre of forest in North and South Carolina will be worth three times as much as the best cultivated land in the South.

There never was such an abundance of unemployed capital at the great money centers as at the present time. The banks of New York have \$60,000,000 locked up in excess of the \$90,000,000 required by law as a "surplus fund." It is strange that some of the shrewd Yankee capitalists do not come South and start a few banks. There are scores of opportunities where an investment of \$50,000 or more in a national bank would be safe and remunerative, for in every town enough local capital could be subscribed to put the institution on a basis ensuring all necessary local support and sympathy. Laurens needs a bank and could subscribe \$20,000 of the necessary \$50,000. Greenwood, this State, will raise half the capital, and a bank there could earn ten per cent. dividends without a doubt. Hickory, Statesville, Newton, Morganton—all five towns in North Carolina—are without banks. The Piedmont Press says: "A large amount of money is brought to this place and disbursed weekly in the purchase of leaf tobacco at the warehouses. There are also large manufacturing establishments here, which are constantly collecting and disbursing considerable sums of money. Besides this, the mercantile business of the town, carried on by more than twenty houses, some of which do business on a very large scale, and by two railroad companies, exact the handling and safe keeping of the funds required in

their various transactions. A bank located here would meet the demands of these different interests, and greatly facilitate the transaction of business."

The agitation over the cultivation of the Le Conte pear does not seem to be confined to South Carolina alone. A dispatch from Hinesville, Georgia, to one of the papers, says: "A large acreage has been planted and the prospect for a large yield this season is promising. Many people think they will be more profitable than the orange culture in Florida. The pear trees will average twenty bushels to the tree when they are fully grown, and the presumption is that they will never bring less than one dollar per bushel. Now, when it is remembered that an orchard of twenty or thirty acres will not require an outlay of fifty dollars per annum, it is not difficult to estimate the profits arising from their culture. They grow in this locality almost entirely without care, and the trees can be hastened very much in their growth, and made to produce more largely with fertilization and culture, as a matter of course." If this industry becomes extensive it will necessitate the establishment of several large canning establishments at such central points as Atlanta, Gainesville, Seneca City, Greenville, Spartanburg and Charlotte.

The Reverend Sam Jones has been stirring things up pretty lively in Dixie, but as a theorist he isn't a marker to a Baptist minister in North Carolina, who has come to the front with the assertion that the frying-pan has prevented the conversion of the world. He is evidently a student of hygiene, for he says the sinner's conscience can best be reached through his stomach, and that the grease and odor of the frying-pan produce a sort of dyspepsia that is decidedly unfavorable to religious reflection and rather more productive of profanity.

The regular annual meeting of the stockholders of the Chester & Lenoir Narrow Gauge Railroad Company took place at Chester the other day. The attendance was large, a special train having been provided by President Hardin to bring in the stockholders. The old officers of the company were all re-elected. A proposal to lease that portion of the road between Newton and Lenoir to the Western North Carolina Railroad Company was submitted to the meeting, and a resolution was adopted authorizing the directors of the company to take such action as might be deemed expedient. It is very probable that the directors will favor the lease, and that another meeting of the stockholders will be called at an early day to consider the matter. The portion of the road to be leased under this proposal has never paid expenses, and the company can well afford to make the lease. The people of Lenoir—which is fast becoming a popular summer resort for Charlestonians—will do all they can to further the proposed lease, and it is to be hoped the matter will be speedily arranged.

There is a good deal of talk now-a-days about railroad competition, and how a diminution of freight rates is secured thereby. In connection with this it is interesting to note that a short time ago an agreement was entered into between Mr. D. Caldwell, of Columbia, general freight and passenger agent of the Charlotte, Columbia & Augusta and the Columbia & Greenville Railroads, and the general freight agent of the Port Royal & Augusta, the Augusta & Knoxville and the Greenwood, Laurens & Spartanburg roads, to put and maintain equitable and equal freight rates at all competitive stations in South Carolina. So long as the rates of freight at Laurens and Greenwood remain the same by both roads, it does not strike the average on-looker that there is very

much in this "competition" business. Of course the more roads there are the more money will be paid out for wages and the more men will be employed. But ought there not to be some way to prevent the so-called competitive roads from forming protective alliances of the kind mentioned? An account of this agreement between Mr. Caldwell and the Georgia Central people was printed in many of the State papers, but, strange to say, there was no comment on it in the editorial columns.

General Robert Toombs, of Georgia, says the negroes "will never leave the South to colonize elsewhere, because they lack foresight, enterprise and independence." The recent exodus of negroes from the Carolinas does not bear out the General's theory. C. R. Holland, a well educated negro leader in Arkansas, has published a number of articles advocating the removal of his race to New Mexico. Holland tells his people that New Mexico is three times the size of Arkansas, with not more population than Arkansas contains in half a dozen counties, with a salubrious climate, with immense quantities of public lands, etc. He suggests that a big convention of negroes be held in Memphis and a committee be appointed to visit New Mexico to select a location and make the necessary arrangements for the homes and transportation of the colonists. He claims that the negroes are financially able after twenty-one years of freedom to go and pay their own expenses. Holland concludes his argument by saying: "It is needless to set forth the good it will do our race to get our homes, publish our newspapers, make our laws, build our towns, and enjoy our own society and civilization. We can do better and have more influence if we are all together, instead of scattered all over the States."

The East Tennessee, Virginia & Georgia Railroad some time ago started the practice of "re-billing" grain shipments from the West. "Re-billing" is a technical railroad expression, and gives the shipper the privilege of testing every market along the route; in other words, of peddling his grain out as it comes along. For instance, the freight on grain from Evansville, Ohio, to Augusta, Ga., is the same as that from Evansville to Charleston or Savannah. A grain merchant, say in Augusta, wants to fill a contract for three carloads of grain. He writes to Chicago to order it, and is informed that if he will take ten carloads he can get it at such and such a reduction. If the "re-billing" system is in vogue he will order ten carloads to be shipped to Augusta, and upon its arrival there will take off the three carloads with which to fill his contract, and without paying any additional freight he "re-bills" the remaining seven carloads to Charleston or Savannah, and sells it to the disadvantage of the grain brokers in those cities.

A prominent Charleston firm, having made an agreement with the Charleston & Savannah Railway, by which they would transport grain from Charleston to Augusta at reduced rates, resolved to get up a deal in corn on the interior brokers. They found that they could place corn in Augusta by way of Charleston for 23 cents per hundred pounds, while the Augusta merchants had to pay 25 cents to get it directly from the West. The way in which they did this was to bring the corn from Chicago to New York by rail, and thence by steamer to Charleston, where it could be landed at a cost of 19 cents per hundred pounds. The Charleston & Savannah Railway Company having agreed to reduce their rate per hundred pounds from here to Augusta from 11 cents to 4 cents per hundred pounds, they were able to give it to buyers in Augusta at a total cost for freight of 23 cents. It's a bad state of affairs when goods can go to Charleston from Chicago

cheaper via New York than by the all-rail route across the mountains.

* * *
DRIFTWOOD.

Cotton-raising not being profitable in some parts of South Carolina, the planters are turning their attention to tobacco culture. There is said to be a belt of land in the State specially adapted to the growth of the finest quality of leaf tobacco.—In Florida some of the largest orange-growers are of the opinion that the late dry weather has considerably affected this year's crop, and predict a smaller yield than usual. The rains of the past week, however, have given the trees a new start and also benefited our farmers and gardeners.—The foreman of the Greensboro' Patriot office was severely stung on the leg by a spider last week. The limb swelled, and in a few hours it could not be used. A poultice of tobacco, *a-la* Clingman, in one night, effected a complete cure. The tobacco remedy has also been used successfully in dropsy in the same county.—A Florida paper says that a Sanford physician, who suspected that some one was peeping through the keyhole of his office door, investigated with a syringe full of pepper sauce. He found his wife half an hour afterward with a bandage over her left optic. She told him that she had been cutting wood and that a chip had hit her in the eye.

Lynchburg's Manufacturing Advantages

In reply to the letter of Mr. G. W. Gibson, of Louisville, Ky., lately published in the MANUFACTURERS' RECORD, in which it was stated that he desired to establish a wire-work factory in some Southern town, Mr. F. B. Deane, president of the Glamorgan Co., of Lynchburg, Va., has written a letter setting forth the advantages of that city for such an enterprise. Mr. Deane's letter, which we are permitted to copy, as it may be of interest to other manufacturers, is as follows:

G. W. GIBSON, ESQ.,

Dow Wire Works, Louisville, Ky.

DEAR SIR—Noticing your letter in the MANUFACTURERS' RECORD of June 6th, I write to invite your attention to this city, hoping that it may possess some of the requisites called for in your letter as necessary to a proper location for your factory.

Reference to the map shows you that Lynchburg is a railroad center, with roads radiating from this point, and by connecting lines bringing it into easy communication with all sections of the country; with peculiar advantages for connection with the whole South and West; with access by two lines with markets of the North and East. We can draw our coal supply over two routes—from the Pocahontas coal field, over the Norfolk & Western Railroad, and from the Kanawha coal fields, over the Chesapeake & Ohio round via Clifton Forge, and from that point to this over two different lines—the Virginia Midland Railroad and Richmond & Alleghany Railroad. There are very flattering prospects that in the very near future that this last road (R. & A. R. R.) will be extended from Clifton Forge, its present terminus, 60 miles farther, to the Kanawha coal fields. This will give us the three competing coal roads, and it may reasonably be supposed to insure us fuel at very cheap rates. Coke for blast furnace use is being delivered here at from \$3 to \$3.10 per ton of 2,240 pounds; coal for manufacturing purposes at \$2.70 per ton of 2,240 pounds. We have access by railroad with tidewater at Norfolk over the Norfolk & Western Railroad, and at West Point, on Chesapeake bay, over Richmond & Alleghany and York River Railroads, with close connection at Richmond over Richmond & Alleghany Railroad with New York line of steamers and sailing crafts for all foreign markets. Freight to Philadelphia via all-rail route,

\$2.75 per ton of 2,240 pounds on pig iron, car-load lots.

We have located here nail and iron works, (capacity, 200 kegs nails; from 7 to 8 tons finished bar iron); one 40-ton blast furnace; one large foundry and machine shop, with ample machinery for heavy work, working in good times 75 to 80 men, equipped with machinery and tools for building blast furnaces, boilers, engines, &c., and with capacity for meeting the wants of this vicinity for machinery of lighter character, such as mill work, &c. Pig iron from \$14 to \$16 per ton; bar iron \$1.90@2 base price.

The city is healthfully located, free from epidemics of all kinds, enjoying good water privileges, and well adapted for a large manufacturing population.

Provisions are comparatively cheap—flour \$3.75@5 per barrel; fresh meats 12@15 cents per pound; fish plentiful in summer at reasonable figures; vegetables and fruits abundant; house rent cheap.

The advantages for concentrating the raw and distributing the manufactured material are worth your notice and consideration. The location of Lynchburg, with reference to the mineral belt traversing the country in a northeast and southwest direction, gives it peculiar advantages as a point for manufacturing cheap iron, both in its production from the raw material and its manipulation into finished articles. Within a radius of 50 miles from its corporate limits are to be found all the ores, abundant in quantity and more than average in quality, necessary for the production of iron of any grade which may be required by the manufacturer. The magnetic and specular ores lying east and south of this city are traversed by two competing lines of railroads, and hematites lying north and west are also reached by two competing lines of railroads. This close proximity of the ores, in connection with the facilities heretofore mentioned for obtaining cheap fuel, afford the iron producer a most inviting field, and one which cannot long remain undeveloped to its fullest extent in this period of the iron trade, when it may be said—its chief requirements are cheap production and cheap delivery to points of consumption. The excellent quality of the iron which can be produced from these ores is a matter of record of long standing, and evidenced in numerous instances by its meeting fully the rigid requirements of inspection by United States government authorities for ordnance purposes, &c.

Before deciding upon the location of your factory, I respectfully ask your consideration of the advantages above set forth, and will cheerfully afford any further information in my power to give, if desired. Very respectfully yours,
F. B. DEANE.

JEROME WHELOCK, of Worcester, the manufacturer of the well-known Wheelock Steam Engine, has just shipped a fine 1,000 horse-power engine to supplement the power now employed to run the great cable street railway system in Chicago, Ill. It will be remembered that the traction machinery for this cable railway was made by Poole & Hunt, of this city. Mr. Wheelock has now in hand three large engines, which will supply in the aggregate 1,800 horse-power, for B. B. & R. Knight, of Providence, R. I. The large Wheelock engine exhibited at New Orleans has been purchased by a North Carolina cotton mill. Thus we see that, in spite of dull times, these works are turning out some big work.

If you are not already a subscriber to the BALTIMORE MANUFACTURERS' RECORD, send us \$3 and you will receive it regularly for one year, or six months for \$1.50.

The Griffin Pulverizer.

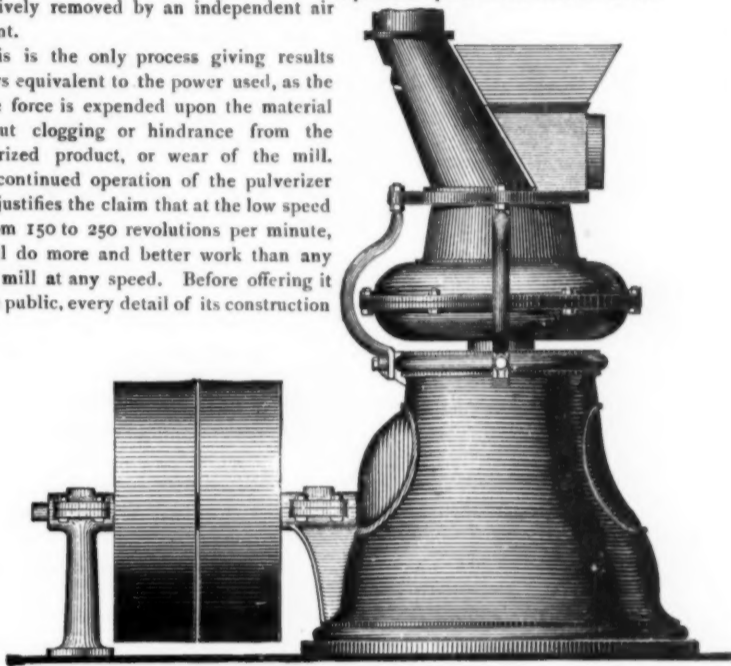
The need of a perfect pulverizer has long been felt, and constant efforts have been made to produce a satisfactory machine to do this work, but many that promised well have proved a failure when put to the test of actual work. A new pulverizer, that seems to fully meet the necessities of the case, has now been put on the market. It is designed for reducing ores, phosphates, carbon and other refractory substances by a new and rapid method of attrition.

In this pulverizer the material is reduced by grinding compact and solid sections thereof, against each other, at low speed. The pulverized product being instantly and effectively removed by an independent air current.

This is the only process giving results always equivalent to the power used, as the whole force is expended upon the material without clogging or hindrance from the pulverized product, or wear of the mill. The continued operation of the pulverizer fully justifies the claim that at the low speed of from 150 to 250 revolutions per minute, it will do more and better work than any other mill at any speed. Before offering it to the public, every detail of its construction

full uniform result. Two other sections, *ff*, bring the air current directly to the line of attrition, so that it sweeps off and carries away the whole pulverized product through the two remaining sections, *gg*, to the settling chamber. The force of the current generated by any suitable blower is so regulated as to determine the fineness of the product, which is delivered of uniform grade without screening or regrinding.

Full tests on quartz, chrome ore, talc, carbon, phosphate rock, etc., warrant the conclusion that this mill fully meets the want of a cheap, durable and efficient substitute for stamps, rolls, burr stones, etc., by avoiding the high speed, strain, wear, inefficient delivery and consequent waste of power in pulverizers hitherto made.



THE GRIFFIN PULVERIZER.

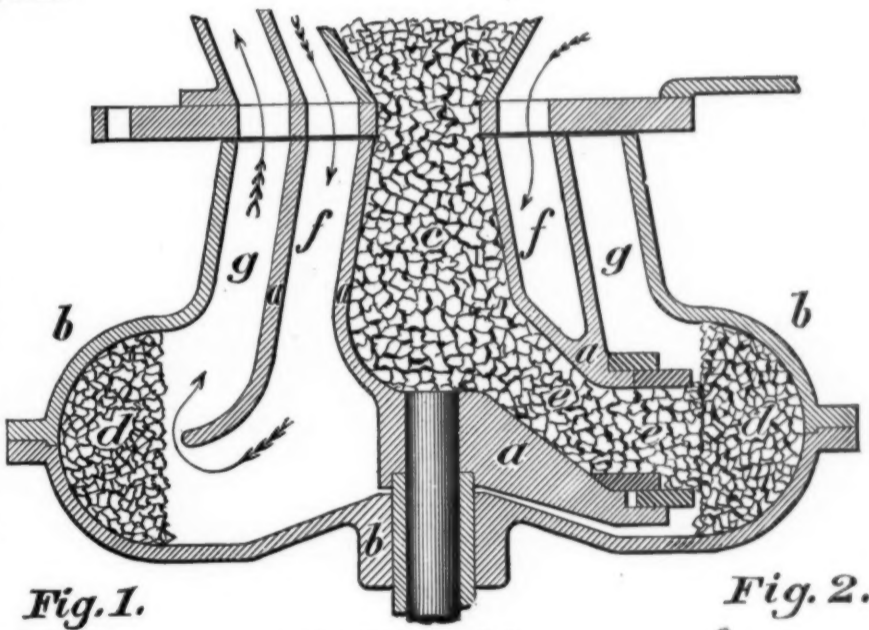


Fig. 1.

Fig. 2.

THE GRIFFIN PULVERIZER.

has been settled by long practical experiment and use.

Referring to the above vertical transverse section through one of the feed and one of the air passages of the machine, it may be briefly described, as composed of a central conveyer, *a a*, with an annular shell, *b b*, both of which rotate horizontally, but at different speeds and in opposite directions by means of gearing or belting, as may be preferred.

In operation the material to be reduced is taken from an ordinary crusher and automatically fed to the conveyer through the passage, *c*, into the outer shell where it immediately forms a solid annular wall, *d d*, to make one of the grinding surfaces. The other surface is the unground material compactly held against this wall in the two sections of the conveyer, *e e*, provided for that purpose. Every revolution gives its

For wet grinding a modified form is used with equal results, water taking the place of the air current. There is no wear on the mill, and with the hardest substances only, a slight wear on the adjustable plates, at the mouth of the feed passages.

The size at present offered, weighing about 3,000 lbs., requires from 15 to 20 horse-power to finely pulverize from 1 to 3 tons per hour, according to the hardness of the material. The price complete being with counter shaft, pulleys and blower, \$1,000.

The annexed certificate shows the actual work on Charleston rock by one of the first machines set up.

READ & CO., PHOSPHATE WORKS,
NEWTOWN CREEK,

88 Wall St., N. Y., May 20, 1885.

In reply to your inquiry as to the work done by your mill, which we put in some

time ago, we beg to report that it is running steadily about one and one-half tons per hour, sixty mesh, at a speed of 200 revolutions per minute. The dynamometer shows that it requires from 18½ to 19½ horse-power. We want another mill at once, and expect to order three more within thirty days. We have tried many iron mills to our cost and were, as you know, decidedly opposed to trying yours, and only did so on the recommendation and request of a mutual friend. Our trial of it has been entirely satisfactory, and its capacity is beyond what you ever claimed for it in quantity and cheapness of running. There being no wearing whatever on the mill itself, we see no reason why it should not last twenty years, by supplying the small costless cast iron wearing plates. Yours very truly,

READ & CO.

THE GRIFFIN MANUFACTURING CO.,
92 Liberty St., New York.

Since writing the above, Messrs. Read & Co. state that the use of ground phosphate by this mill proves that it takes less acid and makes a better fertilizer than material heretofore ground by his burr stones, and two tons per hour is the amount actually done, as certified by the workman.

Further particulars can be obtained from the Griffin Manufacturing Co., 92 Liberty street, New York, N. Y.

Isherwood's Patent Improvement in Loom Temples.

Messrs. Geo. Draper & Sons, of Hopedale, Mass., have issued a circular describing Isherwood's Patent Improvement in Loom Temples, from which we take the following: "This improvement relates solely to the method of holding the roll in its place in the head or pod of the temple. The common method of keeping the roll in position is by means of a pin passing through both ends of the top, holding the roll between them.

This improvement can be adapted to any of the various styles of temples. It consists in placing in each end of the roll a porcelain bushing or plug containing a socket which has a perfectly smooth surface. These sockets form the bearings for the ends of hardwood pins which are driven into the end of the top and into the screw which fastens the top to the lower part of the pod.

The bearing surfaces for the roll are about one-quarter of an inch in length and are as nearly frictionless as it seems possible to make them. Under these conditions no oiling is required, thus saving oil, making it unnecessary to remove the roll to oil it, and requiring no cleaning to prevent surplus oil from getting on to the fabric and damaging its quality. With so small an amount of friction the roll will not stick, and any damage from lack of its free movement is prevented. There can be no wearing of the end of the roll. A roll that sticks may tear the cloth, break or bend the teeth; may make an uneven tension and irregular selvage; may make slack yarn in front and cause skipped threads. Less friction means less strain on the cloth and warp and less wear on the bearing surfaces of the roll. Any improvement which decreases the liability of damage from carelessness or neglect will increase the quantity and improve the quality of the product."

THE MANUFACTURERS' RECORD, Baltimore, Md., is doing a good work for Southern manufacturing industries, and no "live" manufacturing firm can afford to do without it. If people indulged less in pleasing their fancies, and gave more attention to necessities as helps to their business, we should all be better off and business would be improved and strengthened. The RECORD is a necessity.—*Farm and Home and Industrial Review*, Harrisonburg, Va.

CONSTRUCTION DEPARTMENT.

WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

ALABAMA.

William Flesh, of Philadelphia, Pa., is in Birmingham, Ala., prospecting with a view to establishing a stove manufactory.

Mr. Scarborough, Davisville, Ala., has commenced mining iron ore.

Thos. McCumber, Six Mile, Ala., is trying to organize a company to build a spoke and handle factory.

Arrangements have been made between the Alabama Improvement Co., of Sheffield, Ala., and Robert G. Hervey, of New York, for the early construction of the Sheffield & Birmingham Railroad. The machine shops of this road, it is understood, will be located at Sheffield.

Beale & Hails, Montgomery, Ala., lately reported as intending to build a grist mill and ginnery, have purchased their machinery.

The Williamson Iron Company, (capital stock \$150,000,) previously reported as organized at Birmingham, Ala., have elected C. P. Williamson, president and J. B. Simpson, secretary. The Elyton Land Company have subscribed largely to the stock of this company; will erect a 50-ton furnace at once.

Maj. Wallace, who lately leased ore beds near Davisville, Ala., is at work mining ore.

ARKANSAS.

Machinery has been received at Rector, Ark., for the new stave factory.

Arrangements are being made to start a distillery in Fordyce, Ark.

FLORIDA.

C. A. Miller, DeLand, Fla., is getting estimates for a three story hotel.

The Tampa Street Railroad Co., Tampa, Fla., have secured large subscriptions towards building a street railroad.

Orlando, Fla., will decide by vote July 25, whether or not to issue \$50,000 worth of bonds to build water works and drainage system.

It is rumored that a syndicate will build a \$100,000 hotel in Tampa, Fla.

A starch and tapioca factory will probably be established in Lakeland, Fla.

A large opera house is to be built in St. Augustine, Fla.

Burleigh & Miller, Jacksonville, Fla., previously reported as preparing to start a palmetto factory, have machinery on the ground ready to be put in position.

The Palatka Gaslight and Fuel Co. has been organized in Palatka, Fla.

GEORGIA.

Hamburger & Stafford, Barnesville, Ga. want to purchase box-making machinery.

The Baptists will erect a \$10,000 college building in Georgia, probably in Eastman.

John Stevens, Newnan, Ga., is chairman of the committee that is working up the \$25,000 fertilizer factory project previously reported.

The West End & Atlanta Street Car Company will probably extend their line.

W. A. Brown & Son will increase their power at the Silver Shoals Cotton Factory, Flowery Branch, Ga., by the addition of a new engine, which has been purchased.

A cotton seed oil mill project is being talked of in Quitman, Ga.

A charter will be applied for, for a railroad from Eatonton to Monticello, Ga.

Kiner & Farnsworth, Dalton, Ga., are putting up a large evaporator and not an evaporator factory as previously stated.

The Rome City Mills, Rome, Ga., will probably put in an additional new boiler shortly.

Dan Lowrey, Euharlee, Ga., is building a flour mill.

J. M. Howell & Sons, wagon manufacturers, of Greensboro, Ga., contemplate the erection of a large building in Chattanooga, Tenn., for the purpose of building cotton planters.

The Covington & Macon Railroad has been chartered in Georgia, with Col. L. F. Livingston, president.

The Swift Manufacturing Co., cotton manufacturers, Columbus, Ga., are erecting, as previously reported, a building 72x140 feet, and will add, it is said, one hundred looms to their plant.

KENTUCKY.

Gatchel & Fox, Louisville, Ky., have the contract to furnish 5,000,000 brick to a Cincinnati, Ohio, firm.

W. E. Pilcher & J. L. Chamberlain have organized in Louisville, Ky., the Climax Cuff Adjuster Co. to manufacture and sell furnishing novelties. Capital stock \$5,000.

Contract has been given for a courthouse in Harlan county, Ky., to cost \$13,000.

Work has begun on the new railroad from Cloverport to Bennettsville, Ky. The road will penetrate coal fields, which will be developed by English capitalists.

Canady Bros., Troy, Tenn., will erect a planing mill at Mayfield, Ky.

The Paducah Lumber Co., Paducah, Ky., have received contract to build \$8,000 hotel at Nortonville, Ky.

The Ashland Furnace Co., Ashland, Ky., have purchased a new engine for their furnace.

John Smith, of Smith, Mitchell & Co., Catlettsburg, Ky., is reported as intending to erect a saw mill at that place.

Frank Coles, D. A. Leffingwell and Hebe G. Fennacy have incorporated in Kentucky the Limestone Mining & Manufacturing Co., to mine iron ores, coal, &c., to manufacture lumber, to operate mills and factories, &c. Capital not to exceed \$100,000. Principal office to be at Ashland, Ky.

O. S. Bryant, Scottsville, Ky., previously reported as having ordered machinery for a flour mill, is building a 40 barrel mill.

The Old 76 Distilling Co., capital stock \$25,000, has been organized in Newport, Ky., by G. W. Robson, Jr., J. H. Stegman, Chas. F. Strieker, G. W. Robson and W. C. Sanders to establish a distillery.

Jos. Pidgeon, Barlow City, Ky., whose saw and corn mill was lately reported as burned, is preparing to rebuild.

Jas. L. Allan, Allansville, Ky., has remodeled his mill and put in a large amount of new machinery.

LOUISIANA.

The Morgan Steamship Company, Algiers, La., will, it is reported, erect within a year a large foundry building.

R. F. Kellam, Shreveport, La., wants bucket and tub machinery.

A new rice mill, to be known as the Stonewall Rice Mill, is being erected at the corner of Girod and Commerce streets, New Orleans La.

There is talk of an ice factory in Donaldsonville, La.

MARYLAND.

Sloan Bros., Lonaconing, Md., want to purchase brick and tile-making machines.

The town commissioners, Port Deposit, Md., are investigating the feasibility of constructing water works.

The Baltimore Elevator Co. are having one of their grain elevators overhauled and considerable new machinery put in.

The Sherwood Distillery Co. are building a large new distillery at Cockeysville, Md.

A. S. Abell, of Baltimore, will erect a large fire-proof building in Washington, D. C.

MISSISSIPPI.

A cotton factory is talked of at Holly Springs, Miss.

A. Blumer, Moss Point, Miss., will rebuild his steam grist mill at a cost of \$4,000 to \$5,000, lately burned.

The contract for building a church in Meridian, Miss., has been let to C. M. Rubrest for \$9,500.

NORTH CAROLINA.

The Lutherans will build a \$10,000 church in Charlotte, N. C.

S. E. Speir will erect a whiskey still at Bell's Ferry, N. C.

W. A. Coggins, Asheville, N. C., is making arrangements to open marble quarries in Swain county, N. C.

A company has been formed to build a tobacco warehouse at High Point, N. C.

W. P. Stafford, Bringle's, N. C., is repairing his mill.

Capt. Blish and Geo. Merrill are erecting a mill at the Bright Mine in Montgomery county, N. C.

Mr. Saxton, of Canton, Ohio, has purchased the Titus Coggins mine in Montgomery county, N. C., previously reported sold.

G. M. Webb, Jr., will soon establish a tobacco factory in Shelby, N. C.

The Randleman Cotton Factory, Randleman, N. C., reported last week as burned, (loss about \$150,000,) is, we are informed by the treasurer, to be rebuilt.

It is reported that Raleigh, N. C., is to have a tobacco factory.

It is reported that small canning factories will probably be started at Goldsboro, Graham, Smithfield and Winston, N. C. John F. Patrick, commissioner of immigration, Raleigh, N. C., can give particulars.

It is rumored that the shops of the Western North Carolina Railroad may be moved from Salisbury to Asheville, N. C.

The machinery of the cotton seed oil mill, Raleigh, N. C., will be put in a new two-story building 85x45 feet, now being built, the old building being used for the manufacture of fertilizers.

SOUTH CAROLINA.

J. H. Taylor & Bros., Greenville, S. C., have contracted to manufacture cotton presses for H. O. King, and will enlarge their factory and add new machinery.

The capital stock of the Sumter Cotton Mill, Sumter, S. C., will probably be increased \$20,000, to put in additional machinery.

The proprietors of the Haile Gold Mine, (P. O. Haile's Gold Mine,) Lancaster county, S. C., contemplate building a narrow-gauge railroad from their mine to Camden, twenty miles.

The McCormick Manganese Mining Co., J. B. Smith, general manager, of McCormick, S. C., have leased and will develop manganese property.

TENNESSEE.

The Eagle Milling & Manufacturing Co. has been chartered in Memphis, Tenn.

C. T. Titus will erect a saw mill near Grassy Cove, Tenn. The machinery, it is reported, has been bought.

The saw mill of Carpenter & Brown, Columbia, Tenn., is being repaired.

The Cleveland Lumber Co., Cleveland, Tenn., are enlarging their sash and blind factory.

J. C. Forbes, who recently moved from St. Paul, Minn., to Chattanooga, has invented and patented a churn and will manufacture the same in Chattanooga.

Signal City, Walden's Ridge, six miles from Chattanooga, is to have a large hotel, park and drives. Work upon same will soon be begun.

W. O. Coleman, Chattanooga, Tenn., previously reported as intending to manufacture cotton machinery, has organized a company, with Henry P. May and George Holbrook, of Grand Rapids, Mich. They will manufacture cotton cleaners, (their own patent,) gins, presses and a patent combined cotton gin and lapper. During the summer Willingham & Co. will build their cleaners, to supply present orders. Capital to be about \$50,000 and works to be erected this fall. Name of company—Coleman Cotton Cleaner and Gin Company.

The Oval Wood Dish Co., (A. L. Flack, agent,) Tiffin, Ohio, contemplate establishing a factory in Tennessee, and desire information regarding timber.

J. H. Adams, Warner, Mass., is negotiating with Chattanooga, Tenn., parties, for a site for a factory to make all varieties of machinists' tools.

T. Cliff Bates, Columbus, Ga., thinks of moving to Chattanooga, Tenn., for the purpose of putting up a brick-yard and kilns.

T. W. Wright, Elkhart, Ind., is negotiating with certain parties in Chattanooga, Tenn., with the view of building a saw mill in that town.

W. S. Robinson & Co., of Chattanooga, Tenn., have their machinery ready and will begin at once putting up canned fruits and vegetables.

Carpenter & Brown, Columbia, Tenn., have contracted with Litchell & Co., of Abingdon, Va., for the latter to put a saw mill at Waynesville, and cut not less than 1,500,000 feet for the former firm.

Proposals will be received until July 1 by C. E. James & Co., Chattanooga, Tenn., for grading 7½ miles of railroad and building a wooden bridge.

C. Troup, Watseka, Ills., talks of erecting a grist mill in Chattanooga, Tenn.

The Citico Furnace, Chattanooga, Tenn., will be relined.

John Wightman, Williamsport, Pa., contemplates establishing a soap factory at Jonesboro or Johnson City, Tenn.

The building of water-works in Bristol, Tenn., is talked of.

LOCKWOOD, GREENE & CO. MILL ENGINEERS

Office, 65 Westminster St., Providence, R. I.

Carefully prepared plans, specifications and estimates furnished for the construction, equipment and organization of new mills and the revision and improvement of old.

TEXAS.

It is reported that Longview, Texas, will have a flouring mill.

The San Antonio Cremation Co., capital \$50,000, has been chartered in San Antonio, Texas.

A. M. Wheelis proposes to organize a company in Dallas, Texas, to build a natorium.

John B. & Charles E. Ruger, of Lafayette, Ind., previously reported as intending to build a cracker factory in Dallas, Texas, have purchased a site 100x100 feet, on which to erect their factory. Have purchased machinery at a reported cost of \$26,000. H. Similer and George Whemixel are members of the company, which will be organized as the Dallas Cracker Factory.

It is proposed to form a \$300,000 company in Dallas, Texas, to enlarge the water supply and furnish power for factories, by building a large aqueduct and opening a 5-mile canal.

Martin & Schryver, San Antonio, Texas, have received contract to furnish \$150,000 worth of lumber for the San Antonio & Aransas Pass railroad.

The Sequin Street Railroad Co., capital stock \$10,000, has been chartered in Sequin, Texas.

Sam. Allen, I. W. House, J. A. Baker, Jr., G. C. Street and T. H. Scanlan, of Houston, Texas, and Joseph Richardson, of New York, have formed a new company (paid-up capital \$40,000) to operate the Houston Rolling Mills, Houston, Texas, reported last week as sold to Sam. Allen.

Mr. Sherwood, of California, has, it is stated, bought ground in Abilene, Texas, on which he will erect a large flour mill.

The Hughes Bros. Manufacturing and Canning Co. has been organized to establish a fruit canning factory in Dallas, Texas. Capital stock \$100,000, of which \$65,000 is reported paid in; have ordered part of machinery.

The Texarkana & Northwestern Railway Co. has been chartered in Texas, to build ten miles of road from Texarkana, to the Red river. Capital \$100,000, with W. S. Whittaker, A. L. Ghio, Joe. E. Marix, Ben. Whittaker, B. F. Estes, William Buchanan and others as incorporators.

The Phoenix Oil Works, Jefferson, Texas, have increased capital stock from \$75,000 to \$100,000.

VIRGINIA.

Mr. Tanquary is building a mill at Bruce-town, Va.

The Acme Chemical Mining & Manufacturing Co., of Philadelphia, Pa., are opening up a slate quarry near New Castle, Va.

A ten-stamp mill has been erected at the Cummings Gold Mine, Floyd county, Va.

Proposals for laying 2½ miles of track of the Manchester street railroad will be received by the president, John E. Taylor, 1115 Main street, Richmond, Va.

J. G. Layman is erecting a fruit-canning house in Troutville, Va.

Arrangements are being made for the erection of a mill house in Danville, Va.

T. B. Mullen is building a new foundry and machine shop at Lexington, Va.

The building of several tobacco factories is contemplated in Roanoke, Va.

The Staunton Gas Co., Staunton, Va., will build a large gas holder.

WEST VIRGINIA.

B. T. Butler, Gordon McDonald, Edwin T. Rice, Daniel M. Stimson and Gillard Parker, of New York, have incorporated in West Virginia, the Hopkins and Pleasants Lumber Co., to buy and sell land, erect saw mills and wood-working machinery. Capital not to exceed \$50,000, with principal office at Barboursville, W. Va.

The Central Glass Works, Wheeling, W. Va., will close for repairs.

Charles Linkous has leased land at Brush Creek, W. Va., and is mining for gold.

BURNED.

The saw mill of J. T. Deal, near Wakefield Station, Va., damaged by boiler explosion.

The Bullard & Bryson Saw Mill, near Hickman, Ky.; loss \$1,500. Will rebuild, having ordered new saw mill.

Moore & Rogers' cigar manufactory, Paducah, Ky.; loss \$3,000.

The building and machinery of the Texas Steam Laundry Co., San Antonio, Texas; loss \$6,000.

The planing mill and wood factory of J. E. Ellis, Macon, Ga.

Spoke factory of F. M. Vance, Clayton, Obion county, Tenn.

Two Saw Mills, a Ship Yard and a Planing Mill.

POCOMOKE CITY, MD., JUNE 22, 1885.

Editor Manufacturers' Record:

We have rebuilt our saw mill at a cost of \$10,000, and have in addition to that a good steam saw mill in Virginia, which we run continually, and at this place a ship yard, and marine railway and planing lathe, and moulding mills. YOUNG & COLBURN.

An Alabama Quarry.

TALLADEGA, ALA., JUNE 20, 1885.

Editor Manufacturers' Record:

Our quarry is situated 4 miles southwest of city of Talladega, on the Talladega & Coosa Valley Railroad. We supply four iron furnaces—two at Anniston, one at Iron-ton and one at Jenifer. We employ 25 hands, pay 90 cents each. We ship 6 to 7 car loads daily. BINGHAM & MOSELEY.

BROADWAY, N. C., JUNE 22d, 1885.

Editor Manufacturers' Record:

Two new sales tobacco warehouses are being built in Jonesboro, N. C.—one by W. A. Sloan & Co.; the other by Watson & Neal. J. O. A. KELLY.

A New Rice Mill.

NEW ORLEANS, LA., JUNE 15, 1885.

Editor Manufacturers' Record:

I propose to erect a steam rice mill corner Girod and Commerce streets, this city; work now going on. We dispense with pounders, and use the roller machines for removing bran. Patentee, D. L. Shoemaker, Washington, D. C.; trustees, Messrs. Lyon Bros. & Co., Baltimore. C. HALLEN.

MERIDIAN, MISS., JUNE 16, 1885.

Editor Manufacturers' Record:

We completed an addition to our factory—two stories—and shed running whole length. Including the shed, the building is 70x120 feet. Cost, \$2,500 to \$3,000.

MERIDIAN SASH AND BLIND FACTORY.

DALTON, GA., JUNE 17, 1885.

Editor Manufacturers' Record:

We are putting up an evaporator for the purpose of evaporating fruits, vegetables, etc.—probably the largest one in this section—and not an evaporator factory.

KINSER & FARNSWORTH.

Machinery Wanted.

BARNESVILLE, GA., JUNE 22, 1885.

Editor Manufacturers' Record:

We think of purchasing some machinery for making fruit baskets. Can you inform us where we can get the machinery.

HAMBURGER & STAFFORD.

A \$50,000 Company.

CHATTANOOGA, TENN., JUNE 17, 1885.

Editor Manufacturers' Record:

Henry P. May and George Holbrook, of Grand Rapids, Michigan, and myself, of Chattanooga, have formed a company, to be called the Coleman Cotton Cleaner & Gin Company, to manufacture the Coleman Cotton Huller and Cleaner, the Coleman Cotton Gin, the Coleman Cotton Gin and Lapper, and other plantation and cotton-mill machinery, at this place. The company will have a capital of about \$50,000. Twenty-five of the cleaners will be built at once at the local shops here. The company will erect their works this fall, and get in full operation for next season.

W. O. COLEMAN.

A 40-barrel Flour Mill.

SCOTTSVILLE, KY., MAY 18, 1885.

Editor Manufacturers' Record:

I am building a 40-barrel mill combined of stones and roller machinery furnished by Nordyke, Marmon & Co., and will start by July 15, and am using steam power. Plans and diagrams all furnished by Nordyke, Marmon & Co. O. S. BRYANT.

The Randleman Cotton Mill to be Rebuilt.

RANDLEMAN, N. C., JUNE 18, 1885.

Editor Manufacturers' Record:

I hope to rebuild as much as I can this fall. All the hands thrown out of employment have got work—that is, all that would take work, and none of them are idle to-day for the want of work.

J. B. FERRER, Treas.

HOME, TENN., JUNE 15, 1885.

Editor Manufacturers' Record:

I have rebuilt a flour mill to the full roller system.

D. J. PATTERSON.

NEW ORLEANS, LA., JUNE 15, 1885.

Editor Manufacturers' Record:

Several gentlemen here and in New York contemplate erecting an ice factory in this city, but the company is not yet formed. If constructed, the factory will make 100 tons per 24 hours, but as yet nothing is completed.

A. W. BOSWORTH.

A Box Mill.

ATHENS, GA., JUNE 16, 1885.

Editor Manufacturers' Record:

We are preparing to add box making to our planing mill business; capacity 5,000 per day. Our planing mill has been in operation 3 months. Will begin making fruit boxes in July. GRABER & SONS.

RICHMOND, VA., JUNE 15, 1885.

Editor Manufacturers' Record:

The "soap manufacturing" branch of our business is merely the commencement of general co-operation under the auspices of the workmen of this city.

RICHMOND CO-OPERATIVE MFG. & COMMERCIAL CO.

A Soap Factory.

WILLIAMSPORT, PA., JUNE 23, 1885.

Editor Manufacturers' Record:

In the fall I will build a large soap factory, either at Jonesboro or Johnson City, Tenn., in company with others.

JOHN WIGHTMAN.

The Houston Rolling Mills.

HOUSTON, TEX., JUNE 20, 1885.

Editor Manufacturers' Record:

We will start up about 5th July with new company,—Joseph Richardson, of New York, as president; I. W. House, Houston, as treasurer, and Mr. Brownson as superintendent. Paid-up stock \$40,000.

SAM ALLEN.

A Palmetto Factory.

JACKSONVILLE, FLA., JUNE 17, 1885.

Editor Manufacturers' Record:

We are starting a palmetto factory 20x100 feet for the manufacture of palmetto fibre, palmetto brushes, fly brushes and mattress material. All our machinery is on the ground. Will start July 15 or sooner.

BURLEIGH & MILLER.

SALISBURY, N. C., JUNE 20, 1885.

Editor Manufacturers' Record:

The mill was furnished by Capt. Wilkes, of Charlotte, N. C., 750 lbs., ten stamps, to W. R. Cummings & Co., a home enterprise. In a new mining section they are running on free milling ore of good grade. Cost of mill, engine and mill-house about \$3,500.

JAS. A. GILL, Mining Engineer.

To Rebuild Mill.

MOSS POINT, MISS., JUNE 15, 1885.

Editor Manufacturers' Record:

Will rebuild my steam grist mill at once. Size of building 35x60 feet, 2½ stories. Cost of same will be from \$4,000 to \$5,000. Will not put up my tannery at present.

A. BLUMER.

MONTGOMERY, ALA., JUNE 19, 1885.

Editor Manufacturers' Record:

We are erecting and have now under construction a steam ginney and grist mill and wood-yard; will be completed some time in July. We purchased our outfit of Tanner & Delany, Richmond, Va. We will start three gins and one set of rock.

BEALE & HAILS.

To Rebuild.

BARLOW CITY, KY., JUNE 17, 1885.

Editor Manufacturers' Record:

I am making preparations to rebuild my saw and corn mill burned on the 20th ult. The work proposed to be done will cost me \$1,500. My loss in lumber and plant was \$3,000.

JOS. PIGEON.

SIX MILE, ALA., JUNE 17, 1885.

Editor Manufacturers' Record:

We intend erecting a spoke and handle factory, provided we can make satisfactory arrangements. It is only wind work now, although \$2,000 have been subscribed. We do not know that we can get a company strong enough. We aim to get up a stock company.

THOS. McCUMBER.

Ice Factory Wanted.

OPELIKA, ALA., JUNE 17, 1885.

Editor Manufacturers' Record:

Opelika, Alabama, wants an ice factory, say about 8 or 10 ton machine daily capacity. Parties interested may correspond with W. B. Shapard.

H. L. DAUGHTIEY.

Machinery Wanted.

SHREVEPORT, LA., JUNE 15, 1885.

Editor Manufacturers' Record:

Please give me the names of a few manufacturers of bucket and tub machinery.

R. F. KELLAM.

A Grist Mill.

MEDINA, TENN., JUNE 18, 1885.

Editor Manufacturers' Record:

We have built a steam grist mill at this place; will attach a cotton gin in the fall.

WILLIAMS & WATT.

FORT WORTH, TEXAS, JUNE 16, 1885.

Editor Manufacturers' Record:

We have located a distributing house for the sale of the Rock Island Plow Company's plows—(successors to B. D. Buford & Co.) We do not make the goods at Fort Worth.

BUFORD, ALDRICH & WORTHINGTON.

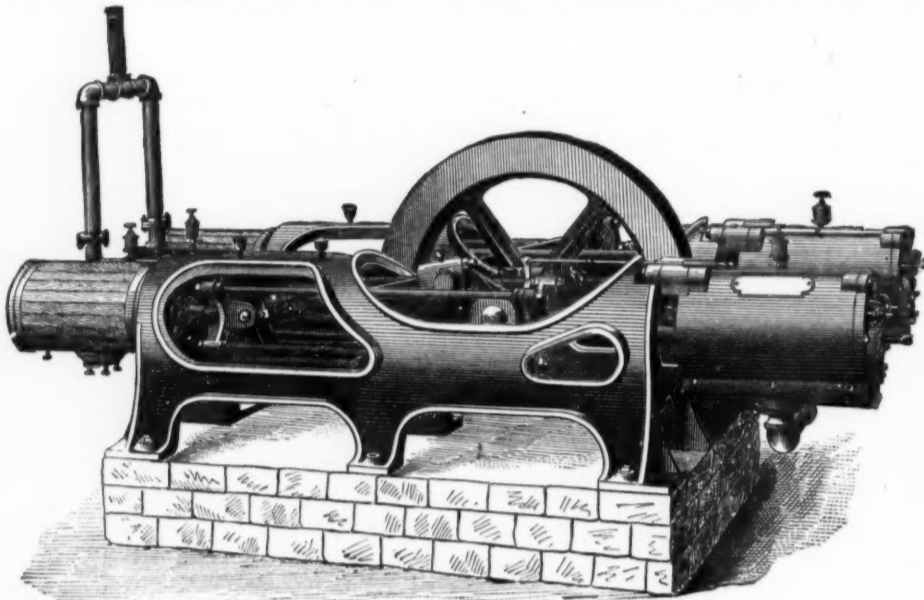
The Bennett Air Compressor.

We illustrate in this connection the Bennett Air Compressor. It is offered to the public, not as an experiment, but as a practical machine, which has been thoroughly demonstrated by long and severe tests, extending through a period of five years. There are now over fifty machines in successful operation, giving perfect satisfaction.

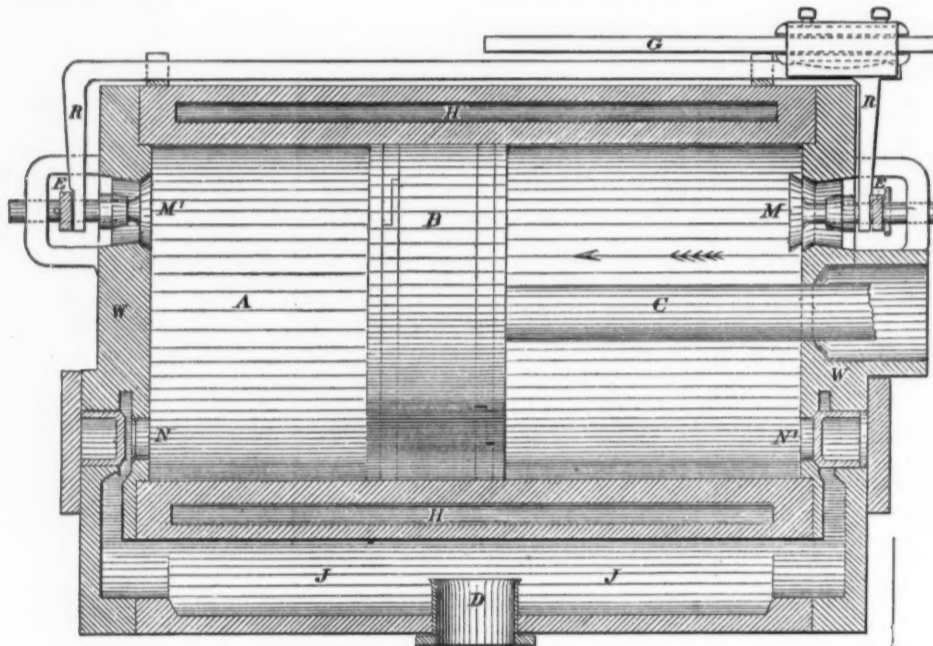
Cuts Nos. 1 and 2 represent a section of of the air cylinder and an end view of the heads, showing the arrangement of valves. The cylinder A is provided with a water jacket H, through which cold water circulates in order to cool the air during compression. The piston B is unusually wide and is provided with self-adjusting packing rings. The piston is cast in one piece and there are no joints or screws to leak or get out of order. The induction valves are shown at M. There are two for each head; they are very large and allow the air to follow the piston at a moderate velocity and with very little friction. The air valve is the most important detail connected with an air compressor, and on its perfect action depends the economy and efficiency of

der. As the tappet arm is very light, the friction produced by the rod G in sliding through the gibs is sufficient to move the arms three-eighths of an inch, or the distance between the head and cross bar on the valves; thus it will be observed that the valves are opened on one end and closed at the other at the end of each stroke of the piston. When the crank is on the "dead center" the motion of the cross head is very slow. As it is during this portion of the stroke that the valves are

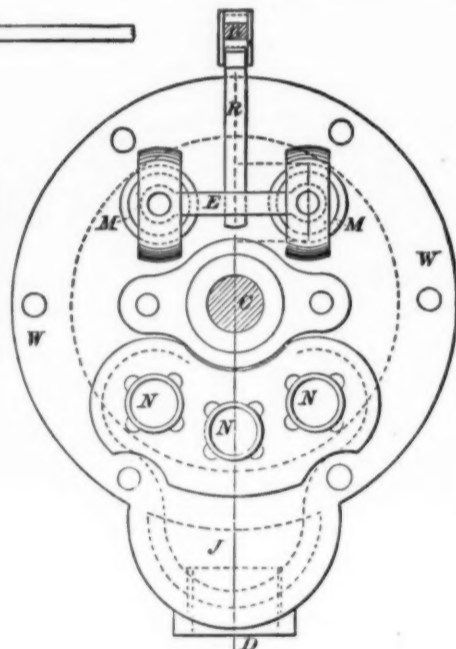
The "trunk" bed has been used, as it is the stiffest and strongest and is especially adapted to resist the heavy and variable strains to which an air compressor is subjected. There is but one connecting rod attached to the steel crank shaft in the centre of the bed. This arrangement is more simple and efficient than the method commonly used, consisting of a projecting cross head and pins and two outside connecting rods attached to crank pins in the fly wheels.



THE BENNETT AIR COMPRESSOR.



NO. 1.—SECTION OF AIR CYLINDER.



NO. 2.

the machine. A perfect valve must have sufficient opening and area to allow the air to fill the cylinder at full atmospheric pressure. It must also close perfectly tight in order to prevent leakage, and in addition to these two features it must move without excessive knock or jar, otherwise it will soon cut and wear both valve and seat, and cause leakage. The valves in this compressor are opened and closed by the motion of the piston itself. A friction rod G is attached to the cross head and partakes of its motion. It passes through a box provided with spring gibs mounted on the tappet arm R. The gibs are of brass and are held up against the friction rod by two weak elliptical springs, so that they are always self-adjusting and always exert the same pressure on the rod G, which, however, is very slight. The tappet R terminates at each end in a fork or hook, and has a play of about three-eighths of an inch. It will be noticed that the fork or hook is placed between the cross bar connecting the two valves and the heads H H of the cylinder.

opened and closed, it will be readily understood how all jar and knock is avoided.

The action of the valves is in fact so easy and gentle that the movement of the valve can scarcely be heard, and it is owing to this entire absence of pounding that these valves are so much more durable than those in common use.

The discharge valves are shown at N, and are three in number to each head. They are of the "cup pattern," and fit into long glands bored out of the heads. They are so proportioned that they allow the compressed air to escape without perceptible back pressure. Both the induction and the discharge valves are admirably adapted to high speed, and many of these compressors are running up to 200 revolutions per minute, without injury or undue wear of the valves. By the use of the indicator it was clearly demonstrated that the action of the valves at high speed was just as perfect as when running at eighty revolutions.

The guides are circular and are bored out of solid metal in the frame at the same time that the ends are faced off and recessed for the steam and air cylinders thus bringing the guides in perfect line with the two cylinders. The cross head is very heavy and exceedingly simple. It is provided with a tapering shoe at the bottom, adjusted by a single screw to take up wear. Its length is three-fifths of that of the stroke. The connection between air and steam cylinder is made by four heavy steel gang bars, secured to and connecting the two cross heads. In the manufacture of these machines the greatest care is used in fitting up the various parts and details. The steam valves and seats are accurately scraped to a perfect bearing, as are also the cross heads and guides. The journals and crank pins are accurately ground and polished. The fly wheels are turned and balanced. When the machine is finished it is bolted to a foundation and connected with a steam boiler and air receiver and run for several days under heavy

pressure. Indicator cards are taken from steam and air cylinders, and should the slightest defect exist it is sent back to the shop and refitted. For particulars and prices address Chas. W. Melcher, 620 Chestnut street, St. Louis, Mo.

The Clapp-Griffiths Steel Process.

It is to manufacturers who have heretofore made wrought iron that the Clapp-Griffiths process is especially valuable. We doubt if there is an iron rolling mill owner who has not been sensible to the serious inroads that steel has been making during the past few years into the iron business. The iron-rail industry, which a decade ago was one of the leading branches of the iron trade, has been almost totally extinguished by the competition of the steel rail, and the manufacturers of iron nails cannot fail to see that their business is in danger of sharing the same fate by the competition of the steel nail. All branches of the manufactured iron trade feel the effects of the competition of steel. To the blast furnaces of this country the Clapp-Griffiths process offers advantages that are equal if not superior in question of cost of production to the benefits which the rolling mills would derive from operating. While the cost of erecting the plant at blast furnaces would be about the same as at rolling mills, the cost of producing the steel would be less. At blast furnaces there would be a saving as compared with rolling mills in the cost of labor, in the remelting of the pig iron and on freights. Between each

cast at furnaces the majority of the workmen have little or no work to perform, while a few have only to prepare the casting-bed for the next cast. With converters connected with the furnace the preparation of the casting-bed becomes unnecessary, and the main body of the men around the furnace could be employed in converting the pig metal into steel as it comes from the surface. Besides saving the cost of transporting the pig iron to the mill, the time, labor and fuel necessary to remelt the pig metal would be a clear gain in favor of the blast furnace. Of course the furnace would be compelled to pay the freight on the steel to the rolling mill. That it is possible to take the molten iron direct from the blast furnace and convert it into steel has been fully proven by a number of Bessemer steel manufacturers in this country and abroad who produce steel direct from the furnace.

A careful estimate places the cost of converting pig iron into steel by the Clapp-

Griffiths process at from \$3 to \$4 a ton at blast furnaces, and about \$6 a ton at rolling mills. As compared with the other steel-making processes the cost of erecting a Clapp-Griffiths plant is small, and this fact alone will lead to the extensive introduction of the process into the different iron works of the country. At an expense not exceeding \$60,000 a plant of two converters could be built, including all machinery and necessary buildings, which would be capable of producing from 80 to 100 tons of ingots in twenty-four hours. Another fact that especially commends the process to the established iron-rolling mills is the facility with which the steel may be rolled, enabling rolling mills equipped with machinery of fair strength to use it for the manipulation of this steel. When it is also considered that the process permits of the use of a cheap grade of pig iron and produces a high grade of steel at a cost far below that necessary to manufacture muck bar, and that the operation of the plant requires no skilled

The Macdonald Patent Hydrostatic Level.

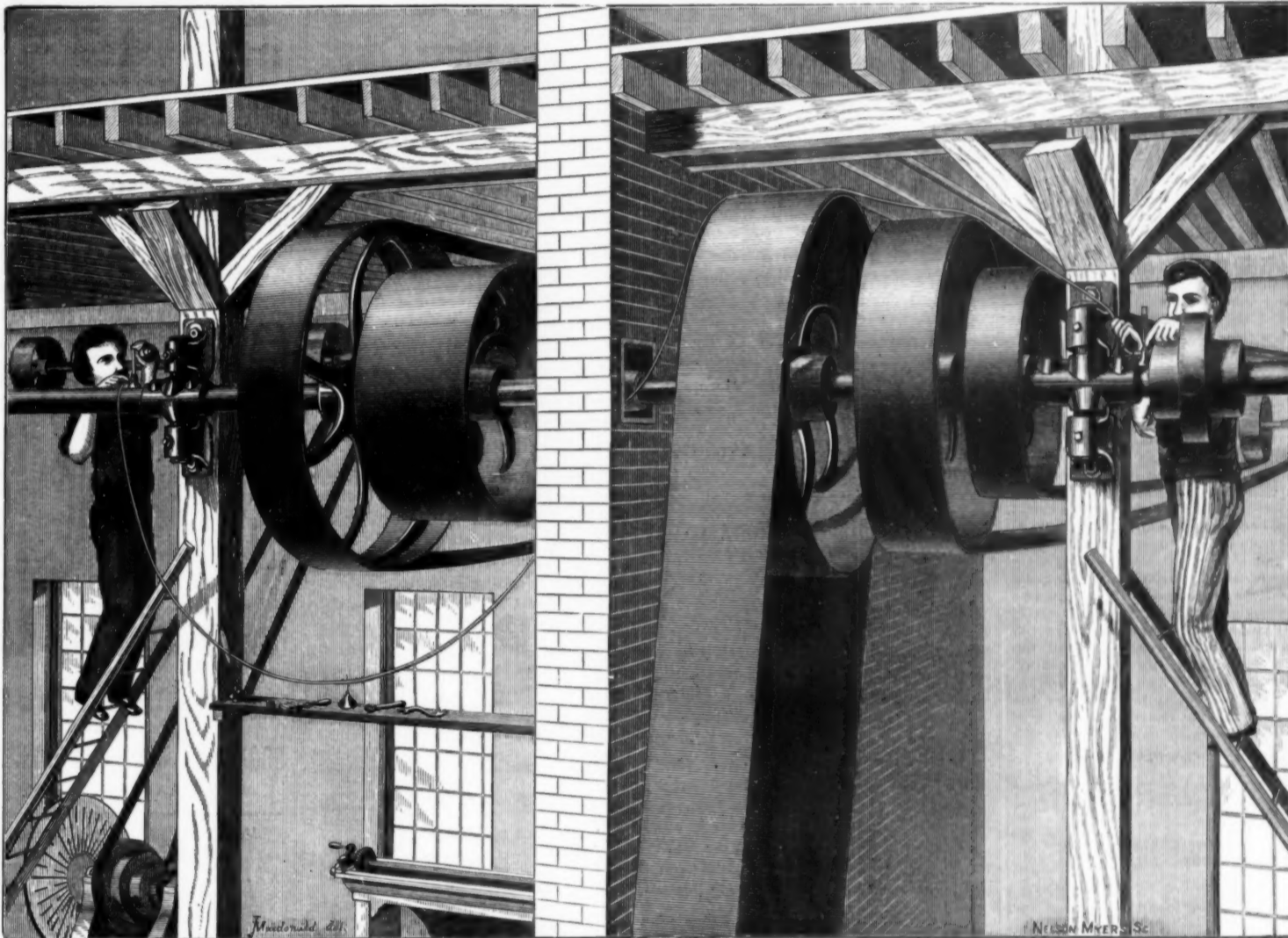
Numerous methods of leveling shafting have been given in these columns, some of them simple, some complex, some accurate, and some only approximately so. Of the utility, or rather the necessity for accurate leveling not only in shafting, but in scores of other instances where machinery, etc., are concerned, there can be no question; it is only a choice of methods and implements.

We give on this page an illustration of the Macdonald Patent Hydrostatic Level, as applied to leveling shafting, though this is only one of the uses to which it can be readily applied. As its name implies, this device is constructed on the well known principle that "water will always seek its level." It consists simply of two metal gauges, in an opening of which a glass register shows the height of the water, connected by a rubber tube of any desired length. At the base of each gauge is a stop cock to open or shut off con-

A Southern Coal Project.

There has been a pretty general opinion among people identified with the coal trade of this city and port that it must be a long time before our rich Southern coal fields could hope to compete with Pennsylvania and West Virginia in the supply of vessel and export coals at Gulf ports. The ease and economy with which this description of cargo can be loaded at Pittsburg and nearly all points on the Ohio and brought to New Orleans in barges has made it difficult for producers as near us as the Cahaba and Warrior fields of Alabama to secure a share of the business. Aside from river freights, phenomenally cheap, the Pittsburgers have an appreciable advantage in their ability to discharge directly from barges into vessels or on wharves in our harbor, while coals from neighboring States must incur the cost of rehandling from cars to touch this important branch of the traffic at all. As long, then, as Southern coals are forced to come to this

regarded by geologists and miners to be one of the richest, most persistent and extensive in the United States, shows its Southern outcrop. A number of capitalists have been looking at this part of the Warrior field with a view to a mining operation of more than ordinary importance. The party includes a prominent mining operator of Alabama, several Eastern men and two or three energetic business men from the Crescent City. Their object is to secure as much coal property as possible on the Pratt seam at the point mentioned, and to shortly commence development on a large scale. They will then set about constructing a tramway to the town of Tuscaloosa, on the Black Warrior river. This important stream, but for some obstructions removable at comparatively small cost, could be navigable all the way to its confluence with the Tombigbee throughout the autumn, winter and spring months. The Tombigbee, from its junction with the Black Warrior, is navigable to the Gulf. Some minor improvements may be



THE MACDONALD PATENT HYDROSTATIC LEVEL AS APPLIED TO SHAFTING.

labor, it will be seen that the process can successfully compete with either the slow and expensive open-hearth furnace or with the Bessemer converter. It is not to be expected that the new steel will go into rails in competition with Bessemer steel-rail manufacturers, but it will be in the smaller forms of steel, such as plates, sheets, nails, tacks, wire, rivets, washers, angles, shovel plate, pipe strips, and a number of other light forms of steel that its competition will be felt.

There is now but one Clapp-Griffiths steel plant in this country, erected last year at the works of Oliver Brothers & Phillips, at Pittsburgh, but two other plants have been contracted for, one to be built at the works of the Western Nail Company, at Belleville, Ill., and one to be built by the Cedar Point Iron and Steel Company, at Port Henry, N. Y., to be operated in connection with their rolling mill. A number of other iron manufacturers are investigating the process, and it will probably not be long before other companies will make contracts for the erection of the plants.—Bradstreet's.

nection between the gauge and the rubber tube. When it is placed on the points to be leveled, the cocks are opened and the water at once seeks its level. Then the cocks are closed and the water is held in each gauge exactly at the point where it came to rest. A comparison of gauges will then show exactly how much the points are out of level in inches and fractions, while a spirit level, on the other hand, only shows that the points are out of level.

The perfect accuracy and convenience of this level are its strong points. Its form gives it especial adaptability to taking levels over long reaches, around corners or over obstructions, an instance of which is given in the engraving. It can be used in dark places just as well as in the light, and no skill is required to handle it. The Webster & Comstock Manufacturing Co., 125 and 127 Ontario street, Chicago, Ill., are the sole manufacturers. Two sizes are made. It has been in successful use in all sorts of manufacturing establishments for over two years, and its users are numbered by hundreds. The manufacturers will, on application, give prices, etc.

and other Gulf markets by all-rail routes it is plain to be seen that Northern competition in the coal trade is bound to amount to a serious obstruction to our home mines.

Much thought and examination has been devoted to this matter by persons interested in Southern coal production and by expert transportation people. It is well known, for instance, that several rivers, navigable or susceptible of being made so during some months of the year at least, penetrate almost to the coal fields, and many plans have been talked over on the basis of utilizing the waterways. Nothing of immediate practical value has arisen from the agitation that we are aware of except in one instance, but in that case it really looks as if a part of the question were on the way toward successful solution. Should the project in hand show the feasibility of the method then it will be doubtless followed by many other attempts in the same direction.

About twenty miles to the southwest of Birmingham, Ala., the great Pratt coal seam,

needed at places, but with what the government may do in the ordinary course of river improvements, the matter is not regarded beyond the reach of private capital. It is probable that coals fully equal to the best known in New Orleans could thus be laid down in barges at Tuscaloosa for about \$1.25 per ton. This should not represent a cost at seaboard to exceed \$2, perhaps \$1.75 per ton. The project is certainly a brilliant one, and, while it does not promise any direct benefit to New Orleans, but would furnish our neighbor, Mobile, with a boom of no insignificant dimensions, the Times-Democrat cannot do otherwise than wish success to its promoters. So long as some point in the industrial and commercial New South is to be benefited by any competition with the old coal monopolies of the East, it shall be our duty and pleasure to smile and cheer on the plucky Southern competitors.—New Orleans Times-Democrat.

☞ If you are not already a subscriber to the BALTIMORE MANUFACTURERS' RECORD, send us \$3 and you will receive it regularly for one year, or six months for \$1.50.

In the manufactured iron market there has been some improvement in trade, with prices having a firmer tendency. Stocks are very light. We quote nominally as before, viz:

Prices for refined iron show no variation. Steel slabs are selling well. Charcoal blooms are occasionally called for. Sheet iron is in active demand. Wrought pipes are ordered quite freely, and the mills are busy. Bridge iron is asked for in 50 to 100 ton lots. There are prospects for an active summer. Steel rails are selling at \$27.50. A few days ago a rumor was rife that some large orders would be placed, but up to present writing the transactions have not yet taken place. It is probable that July and August will be good months for the rail mills. Nails are selling at \$2 to \$2.10 in a large way, and a good deal of stock is being worked off. Old rails (?) are wanted at \$17 to \$17.50. The yards are full of scrap. Receipts of ore last week were about ten thousand tons, imported for the Bethlehem and Pennsylvania rail mills.

Peaches and other summer fruits are putting in their appearance from lower Mississippi and Alabama.

COLUMBIA
THE POPULAR STEEDS
— OF TODAY —


COLUMBIA *BICYCLES*
TRICYCLES

FOR LADIES
— AND —
GENTLEMEN.

ILLUSTRATED CATALOGUE
SENT FREE.

THE POPE MFG. CO.
597 WASHINGTON STREET.
BRANCH HOUSES
112 WARREN ST. NEW YORK
15 WABASH AVE. CHICAGO

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An illustration showing three people riding bicycles and a tricycle on a path. On the left, a person is riding a bicycle. In the center, another person is riding a bicycle. On the right, a person is riding a tricycle. The path is winding and there are trees in the background.

LOUISVILLE, KY., June 22, 1885.

PIG IRON.		
Southern Coke, No. 1 Foundry.....	\$16	30¢ 17 00
" " " "	15	30¢ 16 00
Hanging Rock Coke, No. 1 Foundry.....	16	30¢ 16 00
" " Char'1, " "	21	00¢ 21 00
Southern Charcoal, No. 1 Foundry.....	18	00¢ 19 00
Silver Gray, different grades.....	14	00¢ 15 00
Southern Coke, No. 1 Mill, Neutral....	13	75¢ 14 00
" " " " Cold Short.....	13	25¢ 13 75
Southern Charcoal, No. 1 Mill.....	16	00¢ 17 00
White and Mottled, different grades....	13	00¢ 13 00
Southern Car Wheel, standard brands..	25	00¢ 26 00
" " other brands.....	20	00¢ 22 00
Hanging Rock Cold Blast.....	24	00¢ 25 00
" " Warm	20	00¢ 21 00

Specially reported by W. H. SHIELDS, Pig Iron and Iron Ore, No. 318 Olive Street.

HOT-BLAST CHARCOAL.	
Missouri.....	\$14 50@17 00
Southern.....	17 00@18 50
Ohio.....	— @ —

COKE AND COAL.	
Missouri.....	14 50@17 00
Southern.....	15 00@17 00
American Scotch.....	17 00@20 00

MILL IRONS.		
Missouri.....	14 00	14 50
Southern.....	13 50	14 00

CAR-WHEEL AND MALLEABLE IRON

Southern.....	\$2 00@25 00
Lake Superior.....	22 00@24 00

MISCELLANEOUS.		
Old Rails.....	17 00@	17 25
Old Wheels.....	14 50@	15 00
Wrought Scrap.....	—@	—
Cast Scrap.....	—@	—

Specially reported by S. B. LOWE.

CHATTANOOGA, TENN., June 22, 1885.

There is some better feeling in general business circles than has been for the past month. Trade of all kinds, excepting, perhaps, pig iron, has shown some signs of improvement. Items that go into the construction account of buildings are particularly active. Some of our foundries that are running on specialties are active and running full. So far as prices are concerned, they remain about the same, hence we make no change in quotations. We quote:

No. 1 Foundry	\$14	50	@ 15	50
No. 2 Foundry	13	50	@ 14	50
American Scotch	13	50	@ 14	00
Car Forge	12	50	@ 13	00
Ores, Red and Brown	22	00	@ 24	00
Furnace Coke	1	50	@ 8	50
Nails, car-load lots, 30 days	—	—	@ 8	25
Bar iron, per lb.	—	—	@ 1	75
Old Rails	—	—	@ 16	00
Old Wheels	—	—	@ 13	50
Wrought Scrap, No. 1	—	—	@	—
No. 2	—	—	@	—
Cotton Tie Clippings	—	—	@	—
Cast Scrap	—	—	@	—
Rail-Road Splices	—	—	@ 1	75
Light Rails	3	00	@	—
Barbed wire—four point galvanized	—	—	@	—
Barb wire—Cambria link	05	@	@ 05	—

All the Woolen Machinery of the Baltic Woolen Mills, located near Philadelphia, and consisting of six complete sets of Wool Cards, Spinning Machines, Broad and Narrow Fancy Looms, Twistors, and Finishing Machinery. To be sold in lots as wanted.

Also the following named Cotton Machinery:

24 36-inch Top Fiat Cards, clothed, with Wellman Self-Stripper, all modern and first-

15 40-inch Bridesburg Looms, 3 Drop Box, 12 Harness, with fixtures.
32 Spinning Frames, 128 Spindles each, $2\frac{1}{2}$ -inch Gauge, built by Whitin Machine Works.
4 Slubbers and 6 Speeders, Lowell make.
12 Rope Machines for making cotton or manilla rope $\frac{1}{8}$ to $\frac{3}{8}$ inches diameter.

SALE
OF
Camperdown Mills
AT
GREENVILLE, S. C.

In obedience to an order made by the Hon. B. C. Pressly, one of the Circuit Judges of the State of South Carolina, dated April 8, 1885, I will sell at public auction, before the Court House door, in the city of Greenville, S. C., on Monday, the 3d day of August next, (1885,) during the legal hours of sale, all the property of every kind belonging to the Camperdown Mills.

The property of said corporation consists of the machinery, tools, implements and appliances of every kind contained in the Cotton Mills and appurtenances thereto, known as Mills Nos. 1 and 2, located in the city of Greenville, on both sides of Reedy River, both driven by water-power taken from the stream supplemented by steam-power, when the latter is required. Also the leases, rights, powers, privileges and franchises belonging or appertaining to said corporation.

These Mills contain nearly 11,000 Spindles, with all necessary preparatory machinery, and are designed and equipped for making Cotton Yarns, either single or double and twisted, brown or dyed.

The machinery is but little worn and is in good condition.

A schedule of the machinery will be furnished upon application.

The real estate upon which these Mills are situated, embracing 36 acres of land with water-power used by the Mills, the buildings in which the machinery is operated, and the tenements occupied by the operatives, belong to another party, and the Camperdown Mills occupy them under a lease, running until the 1st day of March, 1906, the rental of which as stipulated in the lease, is payable semi-annually.

The lease is recorded in the office of the Register of Mesne Conveyance for the county of Greenville.

\$20,000 in cash on day of sale, the remainder of the purchase money to be paid in three equal installments at six, twelve and eighteen months, the credit portion of the purchase money to bear interest from day of sale, at 7 per cent. per annum, and to be secured by the bond of the purchaser and a mortgage of the property, the property to be insured for the full amount of the unpaid purchase money, and policies to be assigned to the Receiver. The purchaser will have leave to anticipate payment of the credit portion or any part thereof.

HAMLIN BEATTIE,
Receiver.
Greenville, S. C., June 17, 1885.

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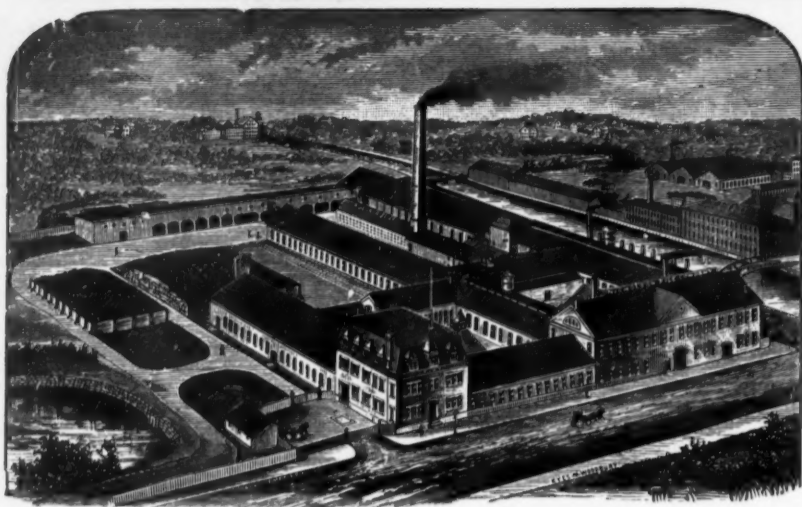
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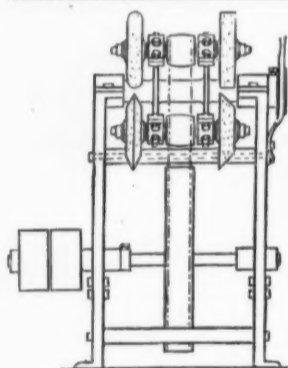
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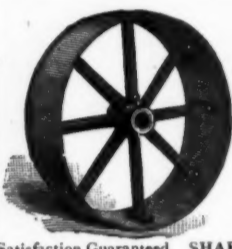
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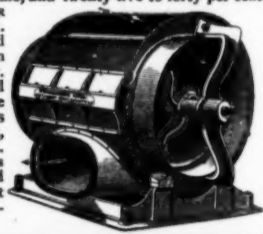
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We manufacture these Cupolas of any desired capacity, numbered from 1 to 20, inclusive, the numbers indicating the melting capacities in TONS PER HOUR—No. 1, one ton; No. 2, two tons; No. 3, three tons per hour, and so on up to 15, or 20 tons. We have improved the construction of these Cupolas in every way, have increased their strength and durability, and sought to make them as convenient for working and repairs as our own and the experience of our customers could suggest.



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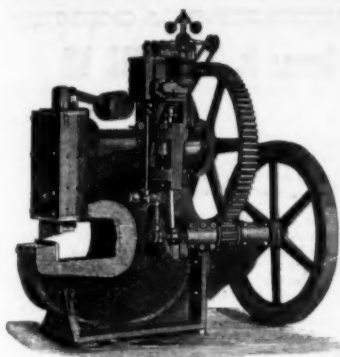
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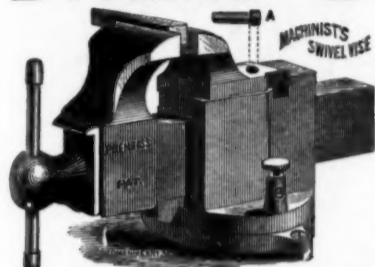
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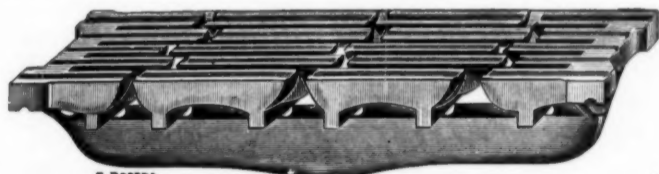


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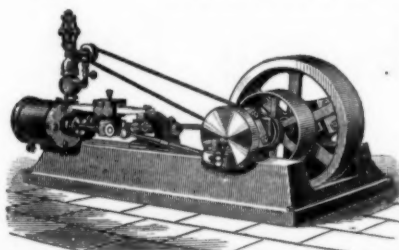
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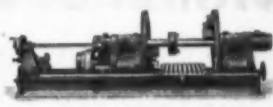
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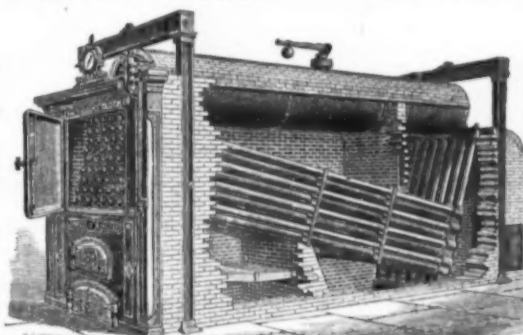
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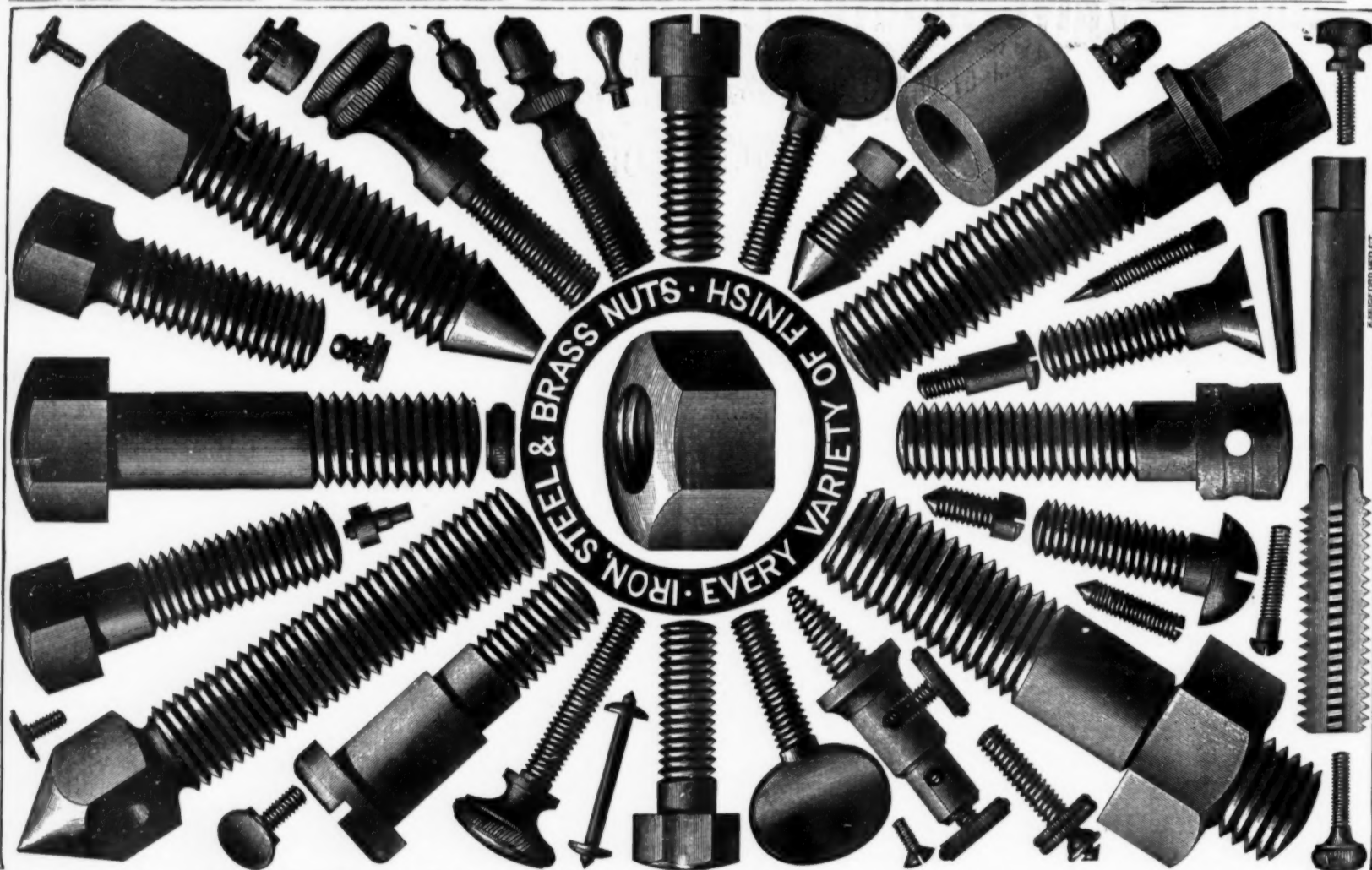
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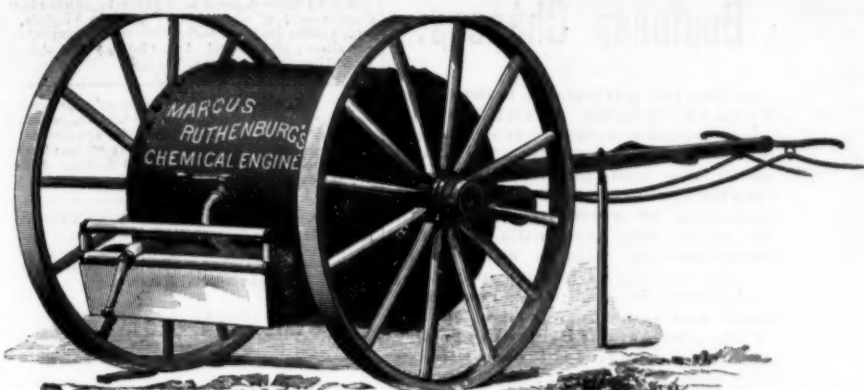
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Expansive Bits, Clark's.....	dis 25%
Hollow Augers, Douglas.....	dis 25%
Hollow Augers, Douglas.....	dis 25%
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Brad Sets, Stanley's Exc., No. 1, \$1.50; No. 2, \$1.50	dis 30%
Brad Sets, Stanley's Exc., No. 3, \$1.50; No. 4, \$1.50	dis 30%
Collins & Co.....	\$1.25; beveled, \$1.75
Cohoes Mfg. Co.....	\$1.25; beveled, \$1.75
Lippincott or Mann's.....	dis 60%
Single Bit, 1/4" to 5/8" and under.....	dis 60%
Single Bit, 1/4" to 5/8" and over.....	dis 70%
Single Bit, beveled.....	dis 70%
Double Bit, 1/4" to 5/8" and under.....	dis 120%
Double Bit, 1/4" to 5/8" and over.....	dis 130%
Double Bit, beveled.....	dis 130%
Second quality Axes.....	50 cts. less than above
AXLES.	
Sheldon & Co., iron.....	55% off
" " steel.....	55% off
AXLE GRASS-PRIMER.....	10 c. 6c.
BALANCES.	
Spring Balances.....	dis 40%
BELLS.	
Hand, Light Brass.....	dis 75%
Hand, White Metal.....	dis 60%
Hand, Silver Chime.....	dis 20%
Hand, Globe (Cone's Patent).....	dis 25%
Gong, Abbe's.....	dis 20%
Gong, Yankee.....	dis 20%
Gong, Barton's.....	dis 20%
Leon Reading.....	dis 25%
Pull, Brook's.....	dis 25%
Crunk, Taylor's.....	dis 25%
Lever, Sargent's.....	dis 25%
Bloomfield.....	dis 20%
Lever, R. & E. M. Co's.....	dis 45%
Call.....	dis 25%
Cow, Common Wrought.....	dis 55%
Cow, Western, Sargent's List.....	dis 55%
Cow, Kentucky, Sargent's List.....	dis 55%
Cow, Moore's or Dodge's, Genuine Ky., new list:	
Nos. 0 1 2 3 4 5 6 7 8 9 10	\$1.25 \$1.50 \$1.75 \$2.00 \$2.25 \$2.50 \$2.75 \$3.00 \$3.25 \$3.50
Cow, Texas "Star".....	dis 40%
BELLGONGS.	
Blacksmith's Common.....	dis 50%
Molder's.....	dis 25%
Hand Bellows.....	dis 25%
BLIND FASTENERS.	
Macrell's.....	dis 10%
Van Sand's Screw Pattern.....	dis 10%
Van Sand's Old Pattern.....	dis 10%
Merriman's.....	dis 10%
Zimmerman's, 10% in.....	dis 10%
Zimmerman's, 9 in.....	dis 10%
Zimmerman's, without screws.....	dis 10%
BLIND STAPLES.	
Barbed, 1/2 in. and larger.....	dis 10%
Barbed, 1/2 in. and smaller.....	dis 10%
BLOCKS.	
Penfield Block Co., Rope and Iron Strap'd.....	dis 40%
BOLTS.	
Cast Iron Barrel Shutter, &c.....	dis 55%
Cast Iron Chain (Sargent's list).....	dis 60%
Wrought Chain.....	dis 55%
Wrought Square.....	dis 55%
Wrt. Shutter, all iron, Stanley's list.....	dis 55%
Wrt. Shutter, Brass Knob, Stanley's list.....	dis 55%
Wrought Shutter, Sargent's list.....	dis 55%
Wrought Sunk Flush, Sargent's.....	dis 55%
Wrought Sunk Flush, Stanley's.....	dis 55%
Wrought B. K. Flush, Stanley's.....	dis 55%
Carriage and Tire, Common, new list.....	dis 75%
Carriage and Tire, Philadelphia Pattern.....	dis 80%
Carriage Bolts, Clarke's.....	dis 80%
Norway.....	dis 75%
R. B. & W. Carriage (old list).....	dis 65%
Tire, American Screw Co's, Phila.....	dis 80%
Tire, "Bay State".....	dis 70%
Eagle Philadelphia Tire Bolt.....	dis 80%
Stove.....	dis 60%
Flow.....	dis 50%
Machine.....	dis 70%
Bolt Ends and Lag Screws.....	dis 70%
BORAX.	
15c 10c net.	
BRACES.	
Q. S. Backus.....	dis 50%
Barber's.....	dis 40%
Spofford's Patent.....	dis 50%
Ive's Patent Braces.....	dis 50%
Common Ball (American).....	dis 55%
Amidon's.....	dis 50%
BORING MACHINES—WITHOUT AUGERS.	
Sweet & Clark upright, 3.60 angular.....	4.40 net
Lawrence.....	3.00 net
Hubbard.....	3.00 net
Phillips, with Augers.....	7.00 7.50 net
BRACKETS.	
Shelf, plain.....	dis 50%
Shelf, fancy.....	dis 55%

BRIGHT WIRE GOODS.	
New list.....	dis 70%
BULL RINGS.	
Union Nut Co.....	dis 55%
Sargent's.....	dis 60%
Humason, Beckley & Co's.....	dis 60%
BUTTS.	
Wrought Brass.....	dis 75%
Cast Brass, Fast Joint.....	dis 20%
Cast Brass, Loose Joint.....	dis 10%
Fast Joint, Narrow.....	dis 45%
Fast Joint, Broad.....	dis 45%
Loose Joint.....	dis 60%
Loose Joint, Japanned.....	dis 60%
Loose Joint, Jap, with Acorns.....	dis 60%
Parliament Butts.....	dis 60%
Mayer's Hinges.....	dis 60%
Loose Pin, no Acorn.....	dis 60%
Loose Pin, Acorns.....	dis 60%
Loose Pin, Acorns, Japanned.....	dis 60%
Loose Pin, Acorns, Jap'd, Plated.....	dis 60%
Tips.....	dis 60%
Wrought Iron.	
Fast Joint, Narrow.....	dis 60%
Fast Joint, Lt. Narrow.....	dis 60%
Fast Joint, Broad.....	dis 60%
Loose Joint, Broad.....	dis 60%
Table Butts, Back Flaps, &c.....	dis 60%
Inside Blind, Regular.....	dis 60%
Inside Blind, Light.....	dis 60%
Loose Pin, Wrt.....	dis 60%
Loose Pin, Light.....	dis 60%
Spring Hinges.	
Coe's Spring and Blank Butts.....	dis 25%
Clarke Hardware Co's.....	dis 25%
American Spring Hinge Co's.....	dis 25%
Gem Spring Hinges.....	dis 25%
Blind Butts, Shepard's, Nos. 50 and 60.....	dis 70%
Blind Butts, Shepard's, No. 50.....	dis 70%
Blind Butts, Shepard's, No. 75.....	dis 70%
Blind Butts, Lull & Porter.....	dis 75%
Blind Butts, Huffer.....	dis 50%
Blind Butts, Clark's, Nos. 1, 3, 5.....	dis 70%
Standard Lull & Porter.....	dis 75%
BOW PINS.	
Humason, Beckley & Co's.....	dis 55%
Sargent & Co's.....	dis 55%
Hotchkiss.....	dis 25%
BUTCHER'S CLEAVERS.	
Humason & Beckley Mfg. Co.....	dis 25%
Bradley's.....	dis 25%
Beatty's.....	dis 25%
1 2 3 4 5 6 7 8	
\$16.50 19.00 21.50 24.00 27.00 30.00 33.50 36.50	
CAN OPENERS.	
American.....	dis 70%
New Idea.....	dis 70%
No. 4, French.....	dis 55%
No. 5, Iron Handle.....	dis 70%
Sardine Scissors.....	dis 55%
Sprague, No. 1, 1/2; No. 2, 2/3; No. 3, 3/4; No. 4, 1	dis 55%
Universal.....	dis 35%
CAPS, PERCUSSION.	
U. M. C., F. C. trimmed.....	dis 10%
U. M. C., F. L. ground.....	dis 10%
U. M. C., C. M. fire ground.....	dis 10%
U. M. C., Double W. Proof.....	dis 10%
G. D. & S. B.....	dis 10%
E. B. 1-10, Eley's.....	dis 10%
Musket, in 1-10's.....	dis 10%
Hicks Ground Edge in Brass Boxes.....	dis 55%
CARTRIDGES.	
Rim.....	dis 50%
Central Fire, pistol size.....	dis 35%
" " Military.....	dis 25%
B. B. Caps, Round Balls.....	dis 1.75
" Swaged Conical.....	dis 1.75
NEW LIST ON CARTRIDGES.	
Rim-fire, 22 short.....	\$ 5.00
" " 32.....	15.50
" " 38.....	18.00
" " 41.....	17.50
Central Fire—32, \$11.00; 38, \$13.50; 41, 15.00; 44, \$19.	
HORSE AND CURRY, new list, July, 1881.	
Cotton, new list, July, 1881.....	dis 10%
Wool, new list, July, 1881.....	dis 10%
CARPET STRETCHERS.	
Cast Steel, Polished.....	dis 50%
Cast Iron, Steel Points.....	dis 50%
Bullard's.....	dis 25%
CASTERS.	
Bed.....	dis 50%
Plate and Shallow Socket.....	dis 50%
Deep Socket.....	dis 25%
Martin's Patent (Phoenix).....	dis 25%
CATTLE LEADERS.	
Humason, Beckley & Co's.....	dis 60%
Sargent's.....	dis 60%
P. S. & W.....	dis 25%
CHAIN.	
German Halter and coil Chain.....	dis 50%
Trace, Breast and Fancy.....	dis 45%
Oneida Halter Chain (old list).....	dis 45%
Galvanized Pump Chain.....	dis 80%
Jack Chain, Iron.....	dis 60%
Jack Chain, Brass.....	dis 50%
CHALK.	
White.....	dis 60%
Red.....	dis 60%
Blue.....	dis 60%
White Crayons.....	dis 60%
COTTON LINES.	
Cotton Fish Lines.....	dis 35%
Cotton Chalk Lines, 30 feet:	
Nos. 11, 13, 15, 17, 30.....	dis 35%
3.00 3.60 4.00 4.50 5.25.....	dis 35%
CHISELS.	
Socket Framing, Crossman.....	dis 65%
Socket Framing, P. S. & W.....	dis 70%
Socket Framing, Douglas.....	dis 70%
Socket Firmers, Crossman.....	dis 65%
Socket Firmers, Ohio Tool Co.....	dis 60%
Socket Firmers, Douglas.....	dis 70%
Socket Corner.....	dis 70%
Tanged Firmers, Butcher's.....	dis 40%
I. Merrill's Socket and Framing Chisel.....	dis 65%
CLAMPS.	
Iron, Screw, Eagle.....	dis 50%
Iron, Adjustable, Stearns.....	dis 20%
Iron, Cabinet, Sargent's.....	dis 65%
Iron, Carriage maker's, Carr & Crawley.....	dis 25%
CLIPS, AXLE.	
Norway or Best.....	dis 60%
Superior.....	dis 45%
Conestogo.....	dis 25%
Coal Hods—Griffiths.....	dis 40%
COCKS, BRASS.	
Racking, new list, July 10, 1880.....	dis 50%
Globe, new list, July 10, 1880.....	dis 50%
Plain Bibbs, new list, July 10, 1880.....	dis 50%
Ale and Beer, new list, July 10, 1880.....	dis 50%
COFFEE MILLS.	
Parker's.....	dis 45%
Logan's.....	dis 50%
Logan & Strobidge.....	dis 45%
Enterprise Mfg. Co.....	dis 25%
COMPASSES, DIVIDERS, &c.	
Compasses.....	dis 55%
Calipers.....	dis 55%
Dividers.....	dis 55%
Cook's Pencil.....	dis 10%

COOPERS TOOLS.	
Bradley's.....	dis 15 00
Barton's.....	dis 20 50
CROW BARS.	
Cast Steel.....	dis 60 00
Iron, Steel Points.....	dis 40 00
CURLING IRONS, &c.	
1/2, 3/4, 1 in., \$1.30, 2.00, 2.50.....	dis 10 00
Curling Tongues.....	dis 35 00
Pinching Irons.....	dis 30 00
CURRY COMBS.	
Fitch's new list.....	dis 50 50
Hotchkiss, Novelty, new list, July, 1880.....	dis 25 50
Hotchkiss, Excelsior Superior Champion.....	dis 25 50
Lawrence, "Perfect".....	dis 25 10
Rubber.....	dis 25 50
Sweet & Clarke.....	dis 50 50
Lusters.....	dis 25 50
CURTAIN PINS.	
Silvered Glass.....	net
White Enamel.....	net
CUTLERY.	
Association (Table).....	net
Naugatuck Cutlery Co.....	net
Excelsior Knife Co.....	net
Wilson's Butcher and Shoe Knives.....	dis 30 50
Ames' Shoe Knives.....	dis 15 50
Wm. Rogers Mfg. Co., Plated Cutlery.....	Net
DOG COLLARS.	
Embossed Gilt.....	dis 20 00
Leather.....	dis 25 50
Brass.....	dis 25 50
DOOR SPRINGS.	
Torrey's Rod, regular size, 1/2" dor, \$3.....	dis 40 10
Gem (Coil):	
No. 1, Large Japanned.....	dis 40 00
No. 2, Medium Japanned.....	dis 40 00
No. 3, Small Japanned.....	dis 40 00
No. 4, ("Shoo Fly") Screen door size, 1.50	dis 40 00
No. 5, Screen door size.....	dis 50 50
No. 6, Medium.....	dis 75 00
No. 7, Large.....	dis 40 00
Standard—10 dor \$1.25; 9 dor \$1.75.....	dis 50 10
8 dor 2.50; 6 dor \$3.50.....	dis 50 10
Hercules.....	dis 50 10
DRAWING KNIVES.	
Ohio Tool Co.....	dis 60 10
Crossman's No. 1.....	dis 65 85
Noble Mfg. Co.....	dis 15 50
Bradley's.....	dis 35 50
Adjustable Handle.....	dis 20 00
P. S. & W.....	dis 70 10
Douglas.....	dis 70 10
DRILLS AND DRILL STOCKS.	
Blacksmiths' Self-Feeding.....	each, \$2.50, dis 10 50
Blacksmiths' Self-Feeding.....	each, 7.50, dis 20 50
Breast, P. S. & W.....	dis 20 10
Breast, Wilson's.....	dis 20 50
Breast, Millers Falls.....	each, \$3.00, dis 25 50
Breast, Bartholomew's.....	each, \$2.50, dis 25 10
Wilson's Drill Stocks.....	dis 10 50
Automatic Boring Tools.....	each, \$2.25, dis 10 50
EGG BEATERS.	
Dover.....	dis 25 50
Medallion.....	gross, \$10.00
Victoria.....	gross, \$10.00
EMERY AND EMERY PAPER.	
Regular numbers.....	dis 60 00
Flour and F.....	dis 40 00
B. & A. Emery Paper.....	dis 30 50
ENAMELED AND TINED WARE.	
Kettles.....	dis 60 00
Sauce Pans.....	dis 40 50
Tinned Sauce Pans.....	dis 40 50
Escutcheon Pins—Brass.....	dis 30 50
RESCUTCHONS.	
Door Lock.....	Same discounts as Door Lock
Brass Thread.....	dis 25 50
Wood.....	dis 25 50
FAUCETS.	
Fenn's.....	dis 40 50
Fenn's Cork Stops.....	dis 33 1/2
Star.....	dis 55 10
Frary's Patent Petroleum.....	dis 20 10
West's Patent Key.....	dis 45 50
Anchor Lock.....	dis 45 50
Metallic Key, Leather Lined.....	dis 60 00
Cork Lined.....	dis 70 50
J. Sommer's Best Metallic Key.....	dis 40 50
J. Sommer's Cork Lined, 1st quality.....	dis 50 50
FILES.	
E. M. Boynton's.....	new list, dis 25 50
Western File Co.....	dis 45 50
Butcher's.....	dis 45 50
Moss & Gamble.....	dis 45 50
H. Diston & Sons (new list).....	dis 40 50
Heller Bros.' Horse Rasps.....	dis 30 10
Nicholson.....	dis 50 10
New American.....	dis 50 10
Union File Co.....	dis 45 50
Stubs, new list.....	\$7.50 to 10, 25 50 off
FLUTING MACHINES.	
Knox, 1/2-inch Rolls.....	\$3.50 each } dis 35 50
Knox, 3/4-inch Rolls.....	\$4.00 each }
Knox, 1-inch Rolls.....	\$6.50
Eagle, 1/2-inch Roll.....	\$2.15, dis 35 50
Eagle, 3/4-inch Roll.....	2.85, dis 35 50
Crown, 1/2-inch, \$3.50; 3/4-inch, \$4.00; 1-inch, \$6.50 each.....	dis 35 50
Crown Jewell.....	6-in., \$3.50 each } dis 35 50
American, 5-in., 3/4-in., 1-in., 1 1/4-in., 1 1/2-in., 1 3/4-in., 2-in., 2 1/4-in., 2 1/2-in., 2 3/4-in., 3-in., 3 1/4-in., 3 1/2-in., 3 3/4-in., 4-in., 4 1/4-in., 4 1/2-in., 4 3/4-in., 5-in., 5 1/4-in., 5 1/2-in., 5 3/4-in., 6-in., 6 1/4-in., 6 1/2-in., 6 3/4-in., 7-in., 7 1/4-in., 7 1/2-in., 7 3/4-in., 8-in., 8 1/4-in., 8 1/2-in., 8 3/4-in., 9-in., 9 1/4-in., 9 1/2-in., 9 3/4-in., 10-in., 10 1/4-in., 10 1/2-in., 10 3/4-in., 11-in., 11 1/4-in., 11 1/2-in., 11 3/4-in., 12-in., 12 1/4-in., 12 1/2-in., 12 3/4-in., 13-in., 13 1/4-in., 13 1/2-in., 13 3/4-in., 14-in., 14 1/4-in., 14 1/2-in., 14 3/4-in., 15-in., 15 1/4-in., 15 1/2-in., 15 3/4-in., 16-in., 16 1/4-in., 16 1/2-in., 16 3/4-in., 17-in., 17 1/4-in., 17 1/2-in., 17 3/4-in., 18-in., 18 1/4-in., 18 1/2-in., 18 3/4-in., 19-in., 19 1/4-in., 19 1/2-in., 19 3/4-in., 20-in., 20 1/4-in., 20 1/2-in., 20 3/4-in., 21-in., 21 1/4-in., 21 1/2-in., 21 3/4-in., 22-in., 22 1/4-in., 22 1/2-in., 22 3/4-in., 23-in., 23 1/4-in., 23 1/2-in., 23 3/4-in., 24-in., 24 1/4-in., 24 1/2-in., 24 3/4-in., 25-in., 25 1/4-in., 25 1/2-in., 25 3/4-in., 26-in., 26 1/4-in., 26 1/2-in., 26 3/4-in., 27-in., 27 1/4-in., 27 1/2-in., 27 3/4-in., 28-in., 28 1/4-in., 28 1/2-in., 28 3/4-in., 29-in., 29 1/4-in., 29 1/2-in., 29 3/4-in., 30-in., 30 1/4-in., 30 1/2-in., 30 3/4-in., 31-in., 31 1/4-in., 31 1/2-in., 31 3/4-in., 32-in., 32 1/4-in., 32 1/2-in., 32 3/4-in., 33-in., 33 1/4-in., 33 1/2-in., 33 3/4-in., 34-in., 34 1/4-in., 34 1/2-in., 34 3/4-in., 35-in., 35 1/4-in., 35 1/2-in., 35 3/4-in., 36-in., 36 1/4-in., 36 1/2-in., 36 3/4-in., 37-in., 37 1/4-in., 37 1/2-in., 37 3/4-in., 38-in., 38 1/4-in., 38 1/2-in., 38 3/4-in., 39-in., 39 1/4-in., 39 1/2-in., 39 3/4-in., 40-in., 40 1/4-in., 40 1/2-in., 40 3/4-in., 41-in., 41 1/4-in., 41 1/2-in., 41 3/4-in., 42-in., 42 1/4-in., 42 1/2-in., 42 3/4-in., 43-in., 43 1/4-in., 43 1/2-in., 43 3/4-in., 44-in., 44 1/4-in., 44 1/2-in., 44 3/4-in., 45-in., 45 1/4-in., 45 1/2-in., 45 3/4-in., 46-in., 46 1/4-in., 46 1/2-in., 46 3/4-in., 47-in., 47 1/4-in., 47 1/2-in., 47 3/4-in., 48-in., 48 1/4-in., 48 1/2-in., 48 3/4-in., 49-in., 49 1/4-in., 49 1/2-in., 49 3/4-in., 50-in., 50 1/4-in., 50 1/2-in., 50 3/4-in., 51-in., 51 1/4-in., 51 1/2-in., 51 3/4-in., 52-in., 52 1/4-in., 52 1/2-in., 52 3/4-in., 53-in., 53 1/4-in., 53 1/2-in., 53 3/4-in., 54-in., 54 1/4-in., 54 1/2-in., 54 3/4-in., 55-in., 55 1/4-in., 55 1/2-in., 55 3/4-in., 56-in., 56 1/4-in., 56 1/2-in., 56 3/4-in., 57-in., 57 1/4-in., 57 1/2-in., 57 3/4-in., 58-in., 58 1/4-in., 58 1/2-in., 58 3/4-in., 59-in., 59 1/4-in., 59 1/2-in., 59 3/4-in., 60-in., 60 1/4-in., 60 1/2-in., 60 3/4-in., 61-in., 61 1/4-in., 61 1/2-in., 61 3/4-in., 62-in., 62 1/4-in., 62 1/2-in., 62 3/4-in., 63-in., 63 1/4-in., 63 1/2-in., 63 3/4-in., 64-in., 64 1/4-in., 64 1/2-in., 64 3/4-in., 65-in., 65 1/4-in., 65 1/2-in., 65 3/4-in., 66-in., 66 1/4-in., 66 1/2-in., 66 3/4-in., 67-in., 67 1/4-in., 67 1/2-in., 67 3/4-in., 68-in., 68 1/4-in., 68 1/2-in., 68 3/4-in., 69-in., 69 1/4-in., 69 1/2-in., 69 3/4-in., 70-in., 70 1/4-in., 70 1/2-in., 70 3/4-in., 71-in., 71 1/4-in., 71 1/2-in., 71 3/4-in., 72-in., 72 1/4-in., 72 1/2-in., 72 3/4-in., 73-in., 73 1/4-in., 73 1/2-in., 73 3/4-in., 74-in., 74 1/4-in., 74 1/2-in., 74 3/4-in., 75-in., 75 1/4-in., 75 1/2-in., 75 3/4-in., 76-in., 76 1/4-in., 76 1/2-in., 76 3/4-in., 77-in., 77 1/4-in., 77 1/2-in., 77 3/4-in., 78-in., 78 1/4-in., 78 1/2-in., 78 3/4-in., 79-in., 79 1/4-in., 79 1/2-in., 79 3/4-in., 80-in., 80 1/4-in., 80 1/2-in., 80 3/4-in., 81-in., 81 1/4-in., 81 1/2-in., 81 3/4-in., 82-in., 82 1/4-in., 82 1/2-in., 82 3/4-in., 83-in., 83 1/4-in., 83 1/2-in., 83 3/4-in., 84-in., 84 1/4-in., 84 1/2-in., 84 3/4-in., 85-in., 85 1/4-in., 85 1/2-in., 85 3/4-in., 86-in., 86 1/4-in., 86 1/2-in., 86 3/4-in., 87-in., 87 1/4-in., 87 1/2-in., 87 3/4-in., 88-in., 88 1/4-in., 88 1/2-in., 88 3/4-in., 89-in., 89 1/4-in., 89 1/2-in., 89 3/4-in., 90-in., 90 1/4-in., 90 1/2-in., 90 3/4-in., 91-in., 91 1/4-in., 91 1/2-in., 91 3/4-in., 92-in., 92 1/4-in., 92 1/2-in., 92 3/4-in., 93-in., 93 1/4-in., 93 1/2-in., 93 3/4-in., 94-in., 94 1/4-in., 94 1/2-in., 94 3/4-in., 95-in., 95 1/4-in., 95 1/2-in., 95 3/4-in., 96-in., 96 1/4-in., 96 1/2-in., 96 3/4-in., 97-in., 97 1/4-in., 97 1/2-in., 97 3/4-in., 98-in., 98 1/4-in., 98 1/2-in., 98 3/4-in., 99-in., 99 1/4-in., 99 1/2-in., 99 3/4-in., 100-in., 100 1/4-in., 100 1/2-in., 100 3/4-in., 101-in., 101 1/4-in., 101 1/2-in., 101 3/4-in., 102-in., 102 1/4-in., 102 1/2-in., 102 3/4-in., 103-in., 103 1/4-in., 103 1/2-in., 103 3/4-in., 104-in., 104 1/4-in., 104 1/2-in., 104 3/4-in., 105-in., 105 1/4-in., 105 1/2-in., 105 3/4-in., 106-in., 106 1/4-in., 106 1/2-in., 106 3/4-in., 107-in., 107 1/4-in., 107 1/2-in., 107 3/4-in., 108-in., 108 1/4-in., 108 1/2-in., 108 3/4-in., 109-in., 109 1/4-in., 109 1/2-in., 109 3/4-in., 110-in., 110 1/4-in., 110 1/2-in., 110 3/4-in., 111-in., 111 1/4-in., 111 1/2-in., 111 3/4-in., 112-in., 112 1/4-in., 112 1/2-in., 112 3/4-in., 113-in., 113 1/4-in., 113 1/2-in., 113 3/4-in., 114-in., 114 1/4-in., 114 1/2-in., 114 3/4-in., 115-in., 115 1/4-in., 115 1/2-in., 115 3/4-in., 116-in., 116 1/4-in., 116 1/2-in., 116 3/4-in., 117-in., 117 1/4-in., 117 1/2-in., 117 3/4-in., 118-in., 118 1/4-in., 118 1/2-in., 118 3/4-in., 119-in., 119 1/4-in., 119 1/2-in., 119 3/4-in., 120-in., 120 1/4-in., 120 1/2-in., 120 3/4-in., 121-in., 121 1/4-in., 121 1/2-in., 121 3/4-in., 122-in., 122 1/4-in., 122 1/2-in., 122 3/4-in., 123-in., 123 1/4-in., 123 1/2-in., 123 3/4-in., 124-in., 124 1/4-in., 124 1/2-in., 124 3/4-in., 125-in., 125 1/4-in., 125 1/2-in., 125 3/4-in., 126-in., 126 1/4-in., 126 1/2-in., 126 3/4-in., 127-in., 127 1/4-in., 127 1/2-in., 127 3/4-in., 128-in., 128 1/4-in., 128 1/2-in., 128 3/4-in., 129-in., 129 1/4-in., 129 1/2-in., 129 3/4-in., 130-in., 130 1/4-in., 130 1/2-in., 130 3/4-in., 131-in., 131 1/4-in., 131 1/2-in., 131 3/4-in., 132-in., 132 1/4-in., 132 1/2-in., 132 3/4-in., 133-in., 133 1/4-in., 133 1/2-in., 133 3/4-in., 134-in., 134 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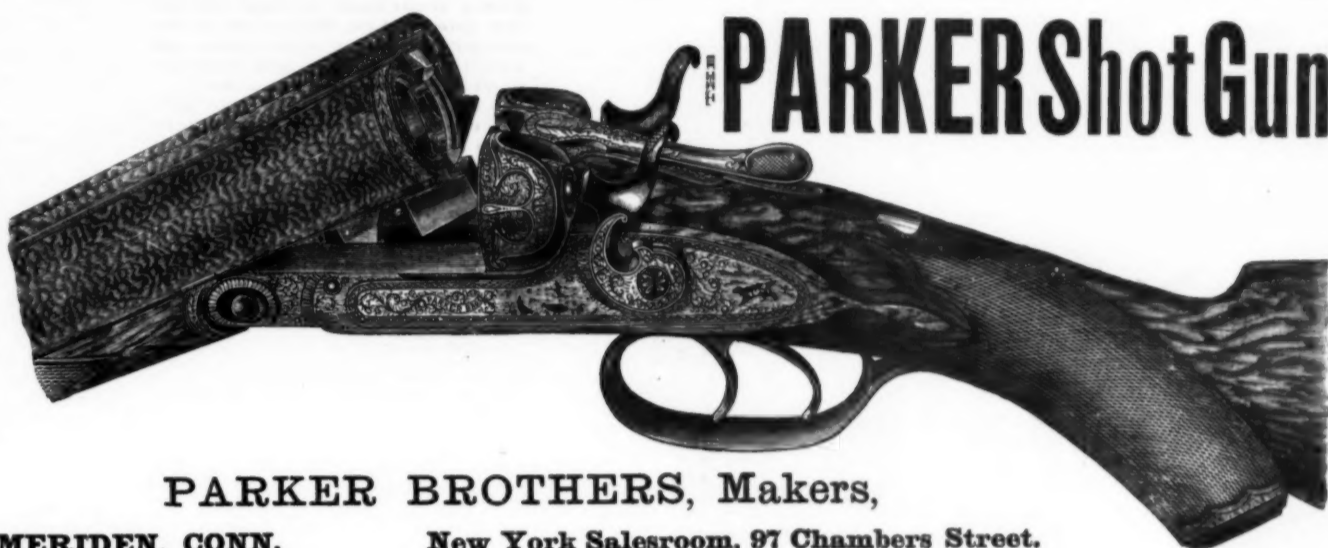
THERE IS NOT a town, village or large mill in the land that can afford to be without the protection from fire afforded by this Chemical Engine. Always ready for instant use. Simple, substantial and efficacious. Write for circulars to

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MARCUS RUTHENBURG, Manager.

Report of the International Gun Trial, held at Bergen Point, N. J., April 3, 1884. Extract from *Turf, Field and Farm* reporting the same: "The Parker Gun, our prominent home manufacture, won the admiration of all by its fine shooting qualities. It registered in both the 10 and 12-bore classes; the greatest number of pellets in the 30-inch circle, and therefore must be awarded the palm for pattern."



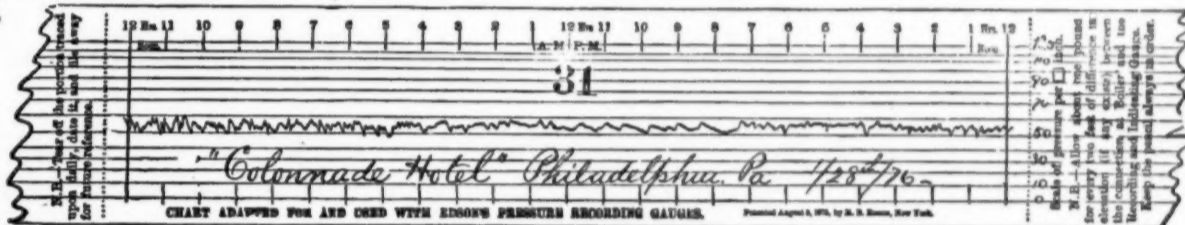
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SAFETY GAUGE FOR OFFICE,
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Edson's Standard Gauges are alike adapted for STEAM, "high" and "low" pressure, WATER, OIL and GAS, in reservoirs, pipes, etc., and are indispensable to SAFETY and ECONOMY.

The Alarm Gong, by ringing at the boiler, PREVENTS EXPLOSION, and SAVES BOTH LIFE AND PROPERTY.

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The Speed of Dynamo Machines, also of Locomotives, should be recorded.

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—R. H. C. VALENTINE, Manager.—

TRADE NOTES.

A Regular Brick.

One of the most important articles needed in a rapidly growing country like the "New South," (where numerous factories, mills, foundries, school houses, fine dwellings, banking houses, etc., etc., are being constantly erected), is good A 1 brick.

Strange to say, there are not many large brick yards in the South. The majority of bricks made in that section are made by hand, and are therefore far more costly than if machine made. Good brick are worth \$8.00 per thousand in almost any market. The cost of labor in a test of the "Grand Automatic Brick Machine," as taken from the pay rolls of a prominent brick manufacturing concern in Cincinnati, Ohio, was but \$1.68 per thousand; the cost of labor, understand, which is the greater part of the cost of brick making.

A finished brick, with edges and corners

who have used it. They have declared it to be the best brick machine in the market, without exception.

It is simple, efficient, durable, and is guaranteed by Mr. Creager to give entire satisfaction, and will not get out of order.

These machines will turn out an A 1 brick with any variety of soil; fire brick of superior finish are made equally well.

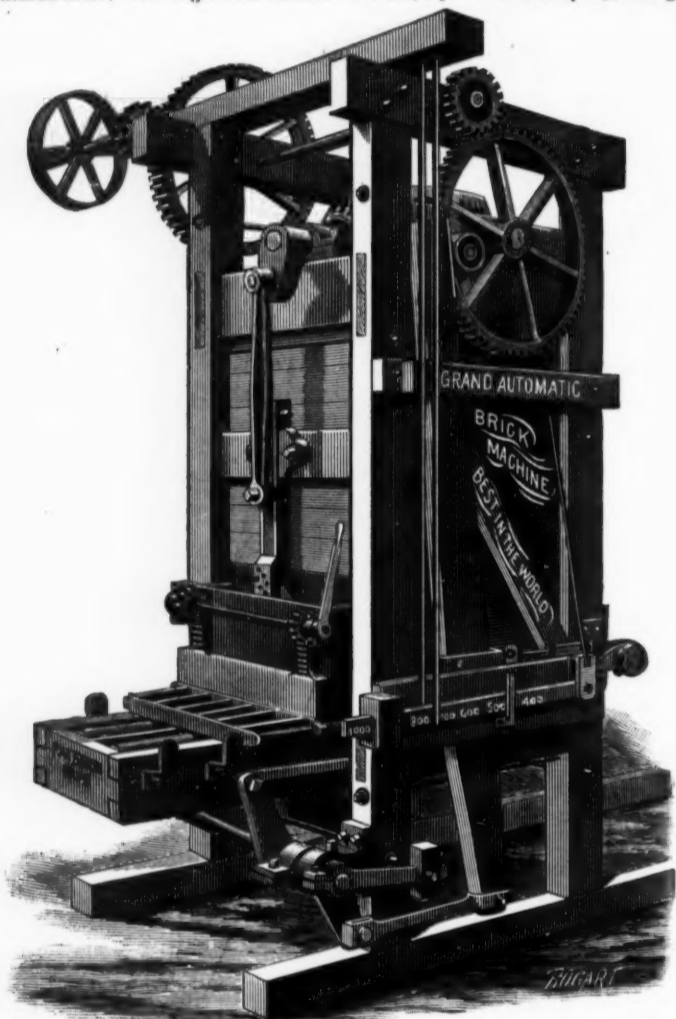
Mr. Creager has received, unsolicited, the most enthusiastic testimonials from each one who has his machine in use, and several have duplicated their orders.

He is prepared to fit out new brick yards in any portion of the United States, and to furnish all necessary supplies at bottom figures. Estimates furnished and correspondence solicited.

Parties starting brick yards in the South, or about to add new machinery, should write for catalogues at once. Address Jonathan Creager, 131 East Front street, Cincinnati, Ohio.

Fine Machinery.

The Paducah (Ky.) News, in describing the new planing mill of the Paducah Lumber Co., says: "The company, through their



GRAND AUTOMATIC BRICK MACHINE.

perfectly defined, is the kind most sought after by first-class contractors and builders everywhere. Such brick always brings the highest market price and finds ready sale.—No hand-made brick can have all these qualities, from the simple fact that everything made by hand is bound to be more or less uneven, and they are apt to be light and porous, owing to a lack of necessary pressure. Not so with machine-made products, for they are ever and always the same; therefore, bricks formed by heavy and ingenious machinery are the best in all respects.

No machine has yet been invented that has given such unanimous satisfaction as the "Grand Automatic Brick Machine," a recent invention of Jonathan Creager's, of Cincinnati, who for twenty years has been engaged in the manufacture of brick machinery. It is especially adapted to press and temper stiff mud, with a capacity of from 25,000 to 35,000 bricks per day, the amount being limited only by facilities for handling or racking.

It has already met with unparalleled success, and has given perfect satisfaction to all

efficient manager, Mr. E. F. Byng decided in rebuilding to put nothing but first-class machinery into it, and it may be said that there is hardly to-day a more thoroughly complete planing mill, with all its belongings, in the United States. The building is a two-story brick, with metal roof and basement, with detached brick, metal roof boiler-house, the entire outfit of the establishment having been furnished by the celebrated machine manufacturers, the Egan Company, of Cincinnati, Ohio. Among the items of machinery furnished by this company is their new and improved fast-feed, lightning flooring machine, which makes a hundred feet of perfect flooring per minute, and will work material on all four sides; also, their new and improved surfacer, which dresses both sides 28 inches wide and 12 inches thick; also their moulding, tenoning, friezing and shaping machines, scroll-saws, band-saws and band re-saws, self-feed rip and self-feed cross-cut saws, with a complete set of sash, door and blind machinery, and many new machines especially adapted to the planing-mill business which we have not heretofore seen in any factory of the country."

Business Chances.

42 For the purpose of making the **MANUFACTURERS' RECORD** a still more valuable medium of communication between its readers North and South, we will publish, **FREE OF CHARGE**, short advertisements, not exceeding 40 words, from those in the South who have mills, factories, manufacturing sites or water-power for sale, capital wanted for industrial enterprises, &c., &c.; while readers in other sections who desire to engage in manufactures at the South are also invited to use these columns, without cost, either in seeking information regarding the advantages and special claims of different localities, or for asking about good openings for men and money. This department is also free for Southern manufacturers who wish to advertise for mill managers, superintendents, engineers, &c.

In corresponding with any of these advertisers please mention the **Baltimore Manufacturers' Record**.

WANTED by a machinist with an established business, a partner with \$3,000 to \$5,000 capital, to start a machine shop and to handle machinery. One of the best locations in the United States. Ample business already promised; room for almost unlimited development. Location, a vigorous and progressive Southern town; perfectly healthful. Investigations solicited. Address Machinist, care **MANUFACTURERS' RECORD**.

FOR SALE—A Stearns saw mill complete with latest improvements, in perfect order; capacity 80 M feet timber a day; 80 horse-power engine; 5 cylinder boiler, edger, saw sharpener, swage, &c.; or rented as it stands with buildings. Mill site and facilities are unsurpassed in the South. Address R. G. Chisom, Charleston, S. C.

WANTED—Situation as engineer to go South; have had 28 years' experience; can give best of Cincinnati reference; am not afraid of work. Address J. Wasmer, care M. Fuller, 376 Clifton avenue, Cincinnati, Ohio.

TOBACCO MANUFACTORY—A party with some capital and a knowledge of the business of manufacturing tobacco can find at Morristown, Tennessee, parties to join him in erecting a tobacco factory. Tobacco growing is a new and increasing industry here, and there are no factories. Address W. H. Coffman, Morristown, Tenn.

A YOUNG MAN of ability, at present employed in one of the large cotton mills in the South, would like to take the management of a mill for a share of the profits. Best of reference as to ability and character. Address A. B., care **MANUFACTURERS' RECORD**.

WANTED—Three to four thousand spindles. Spinning machinery to be put in as stock in weaving mill, now running on plaids. Brick mill; ample power; labor abundant; railroad within thirty feet; in a growing Southern city. For particulars address Plaid Mill, care **BALTIMORE MANUFACTURERS' RECORD**.

IRON—A party who owns in East Tennessee, close to a trunk line of railroad, some of the most extensive iron ore properties in the United States, wants to organize a company with capital sufficient to manufacture them. Address W. N. Coffman, Morristown, Tenn.

FOR SALE CHEAP—A fine mill-site in South Carolina. Location unsurpassed; stream never failing. The fall of water exceeds fifteen feet. 800 horse-power at lowest calculation. Good railway facilities; fuel near at hand and very cheap. In a fine cotton country. Address C. H. Wells, Greenville, S. C.

TALC—A gentleman who has a fine deposit of talc on his farm in South Carolina, near railroad, would like to sell mineral rights in the land cheap. Gold is found in small quantities, and grindstones in abundance. Address Box 160, Greenville, S. C.

BARVTA—We want to purchase baryta property and request information as to where it can be had; would be glad to have particulars of any property of this character that is for sale. Address S. & Co., care **MANUFACTURERS' RECORD**, Baltimore.

WANTED SITUATION—By a man who has had 10 years' experience in spoke and handle business; foreman for 5 years past; a total abstinent and not afraid of work; refers to Southern Spoke & Handle Co., Henderson, Ky. Address A. H. Patton, Henderson, Ky.

A PARTY with capital desires information concerning a good location for a 10-ton ice factory or ice factory and oil mill combined; can build at once. Address Roberts, Room 4, 83 Cedar st., New York.

A DAILY NEWSPAPER in one of the most thriving towns in the South can be bought cheap for cash; now in prosperous condition; town growing rapidly; satisfactory reason for selling. For particulars address the **MANUFACTURERS' RECORD**, Baltimore.

THE OWNERS of a cotton mill in the South want an experienced man to take an interest in the mill, and take charge of same as manager. The officers and other stockholders have had no experience in running cotton factories, and besides, their time is so fully taken up with other business that they can not give personal attention to management of the finances or to the sale of the product. Machinery all new, and of the latest improved patterns. The mill is located in a flourishing and rapidly-growing city, with 6 railroads, and river navigable all the year. Coal is laid at the furnace door for \$1.70 per ton. It is desired that the manager shall have some interest in the mill, and no proposition will be entertained unless the party can put in at least \$50,000. Address A. C. M., care **MANUFACTURERS' RECORD**.

WANTED—By a married man, a situation as overseer or superintendent of twine mill in the South; has had many years' experience in the manufacture of hard, soft and medium twines, warp, yarns, wick, &c. Can furnish best of reference as to ability, character, &c.; or would like to correspond with a party with view of introducing an improved spindle for the manufacture of the same. Address J. E. R., care of **MANUFACTURERS' RECORD**, Baltimore, Md.

WANTED—A party with \$3,000 to join me in the development of 595 acres of land in Virginia, on which there are good indications of lead, canal coal and silver; also coal oil. Lease for 99 years. Address A. S. Hanger, Lexington, Va.

A SCOTCHMAN of twenty years' experience as designer and manufacturer of the best classes of cotton and woolen fabrics, is open for engagement, or partnership with a party of means to manufacture these goods; thoroughly up in all details. Address W. M., care **MANUFACTURERS' RECORD**.

TURNER WITH LATHE WANTED—Will furnish Hickory, Dogwood, Persimmon and Walnut waste, suitable for Handles, etc., with power, house, and garden plot for part of product. Address M. F. J., care **MANUFACTURERS' RECORD**.

WANTED—TIMBER—A purchaser for the finest tract of timber land in Tennessee, near railroad—poplar, ash, hickory, red cedar, white oak and walnut. E. H. Lewis, Nashville, Tenn.

WANTED—A man to take charge of a wood working factory. Address Box 196, Shreveport, La.

FOR SALE—83 acres of land in half mile of the growing town of Warrior, Ala. About 40 acres cleared; 2 good springs; coal under 73 acres. Great bargain. For further particulars, call on or address S. C. Davidson, Warrior, Ala.

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
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
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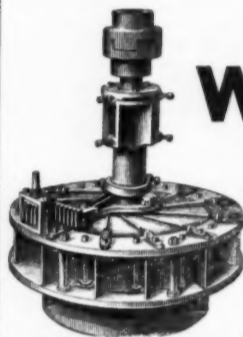
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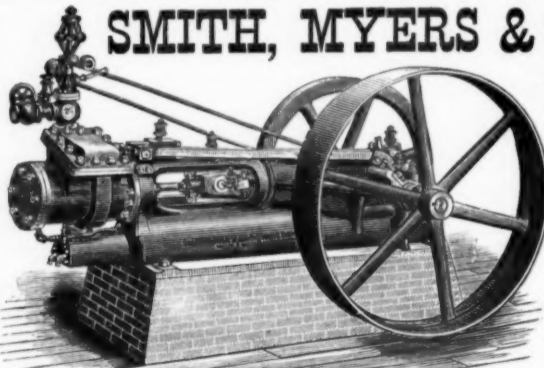
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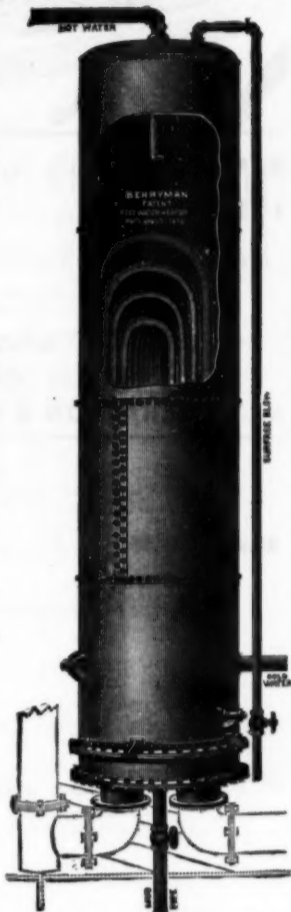
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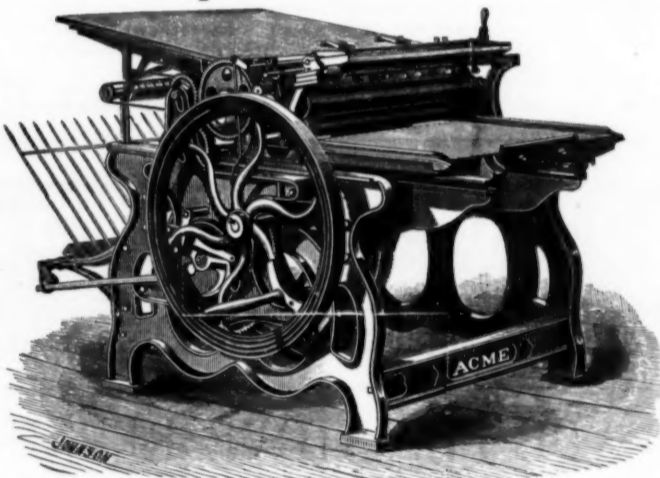
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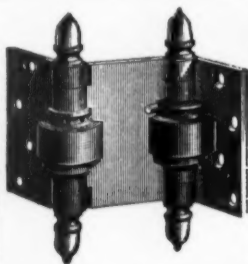
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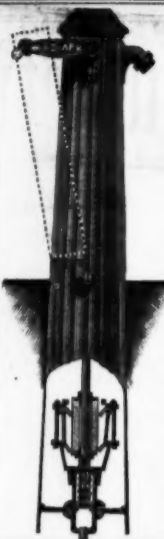
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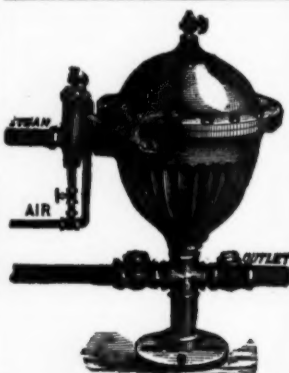
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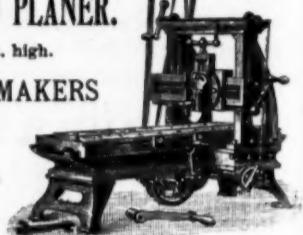
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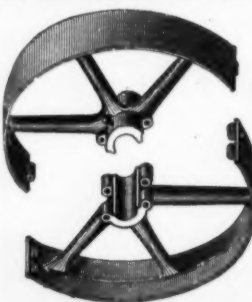
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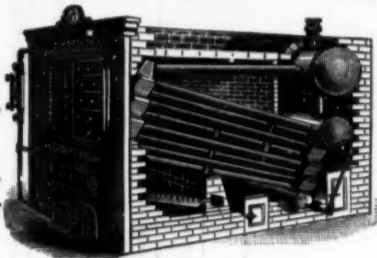
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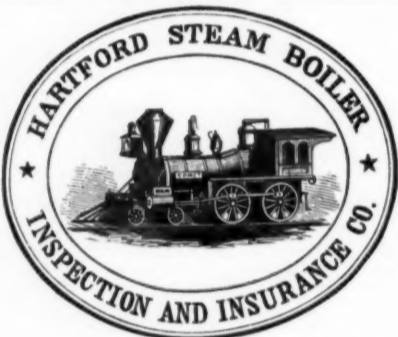
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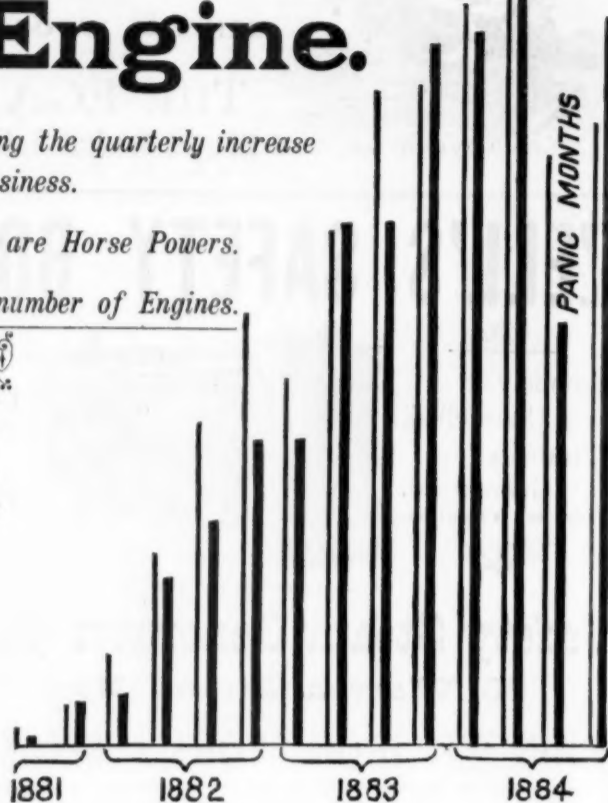
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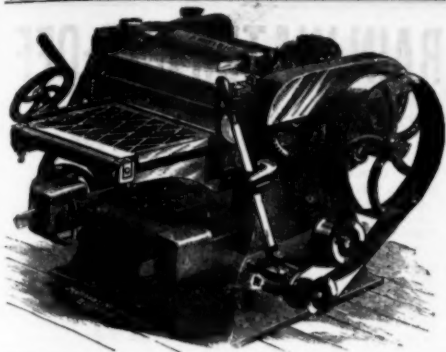
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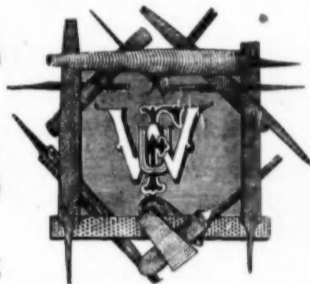
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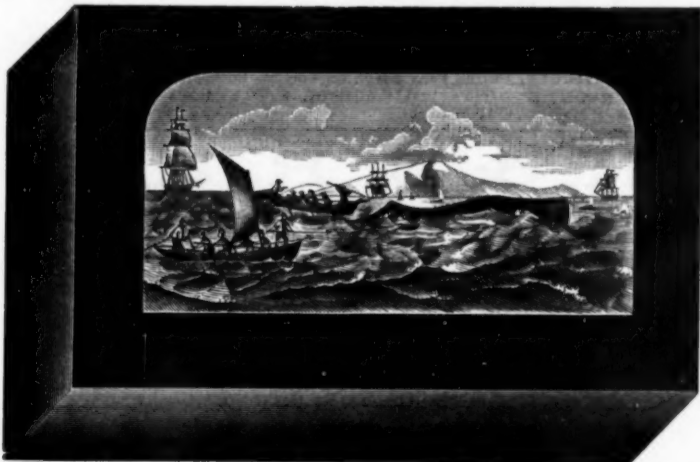
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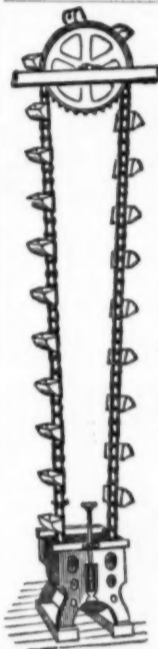
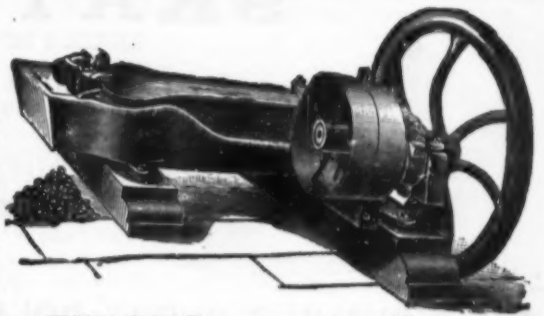
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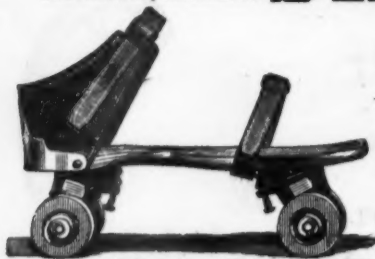
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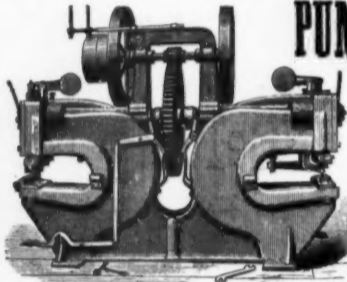
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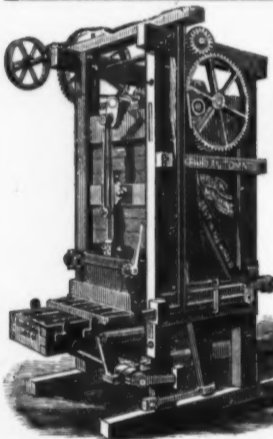
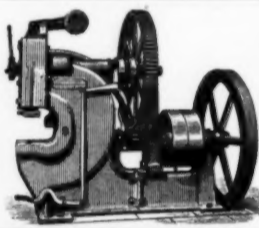
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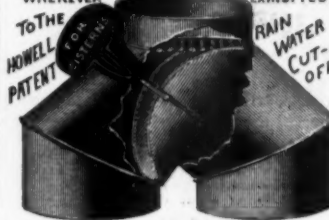
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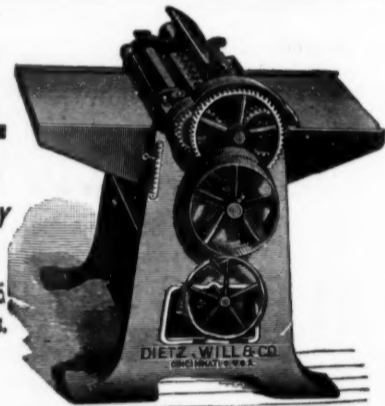
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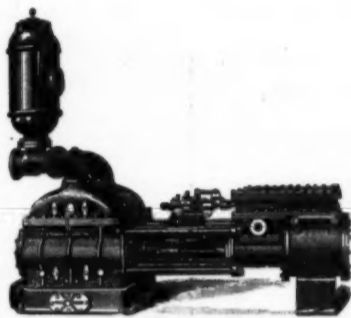
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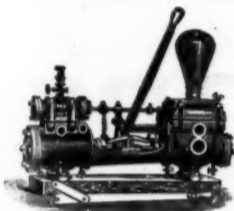
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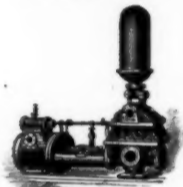
COMPOUND PUMPING ENGINE.



BOILER FEED PUMP.



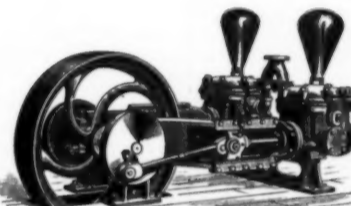
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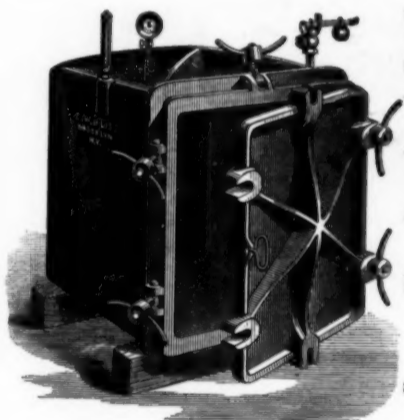
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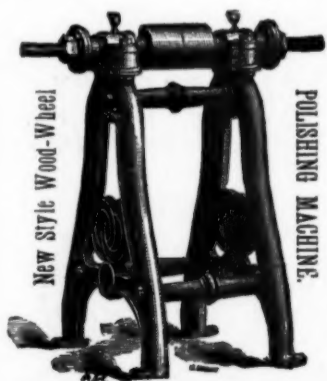
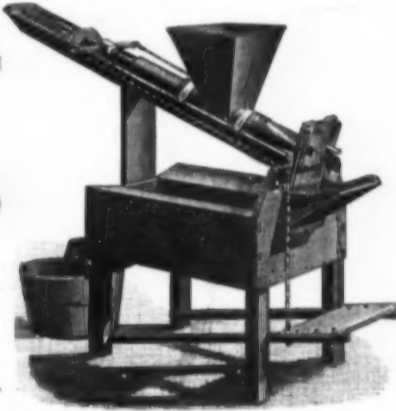
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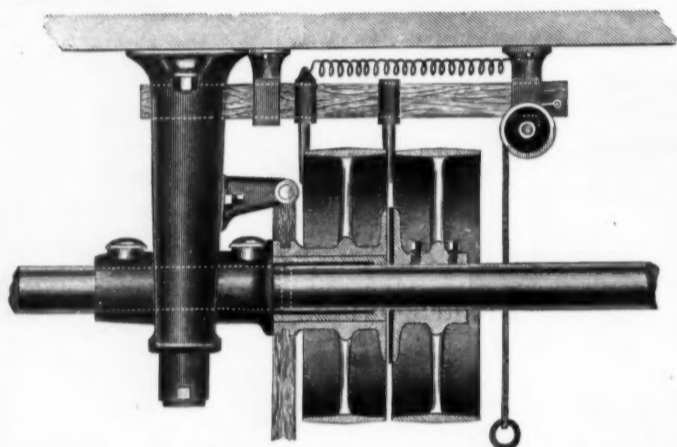
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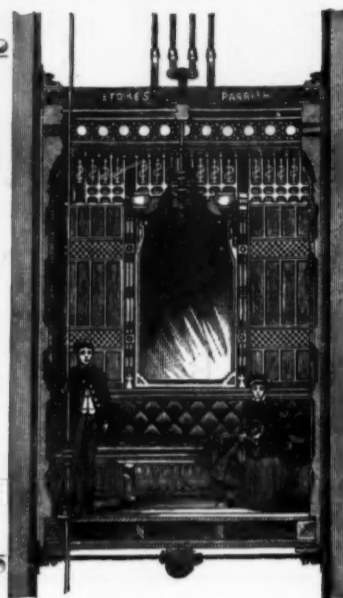
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